EPA REGISTRATION NUMBER 66330-57 – VOL. 4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Alex Hawkins, Jr., Ph.D
Regulatory Manager
Aryta LifeScience North America, LLC
15401 Weston Parkway, Suite 150
Cary, NC 27513

SEP 0 1 2009

Dear Mr. Hawkins,

Subject: Iodomethane Risk Mitigation Requirements

As a condition of registration for all products containing iodomethane, you are required to satisfy any additional risk mitigation required for the older soil fumigants and required to amend your labels in the same timeframe imposed on the other soil fumigant registrants. In the Agency correspondence letters dated August 18th and August 27th, all soil fumigant registrants were informed of the 2010 label mitigation requirements. Your company is in receipt of the letters and label table that were sent to the chloropicrin registrants since your products also contain this active ingredient. Please submit these labels according to the guidance provided by Richard Keigwin's August 18, 2009 and August 27, 2009 letters.

Sincerely,

Mary L. Waller
Product Manager (21)
Fungicide Branch,
Registration Division (7505P)

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
66330-57	SEP 2 9 2008

Term of Issuance:
Conditional

Name of Pesticide Product:
MIDAS™ 50:50

Name and Address of Registrant (include ZIP Code):

Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA Sec. 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

2. Provide a product training/stewardship program using criteria agreed upon by the Agency.

3. Satisfy any additional data requirements and add any additional risk mitigation as required by the Agency once the Agency makes a decision for the soil fumigant group.

4. Submit a label amendment within the same timeframe imposed on other soil fumigant registrants for similar label amendments.

The labeling subject to this conditional registration is the labeling accepted on June 4, 2008.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

Signature of Approving Official:
Mary L. Waller

Mary L. Waller, Product Manager (21)
Fungicide Branch, Registration Division (7505P)

Date:
9/29/2008

Arysta LifeScience

Ms. Mary Waller
Product Management Team (21)
Fungicide-Herbicide Branch (H7505C)
Registration Division
Office of Pesticide Programs
Document Processing Desk (APPL)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Subject: Iodomethane Technical, EPA Reg. No. 66330-44; MIDAS®98:2, EPA Reg. No. 66330-43; MIDAS®50:50, EPA Reg. No. 66330-57; MIDAS®33:67, EPA Reg. No. 66330-59; MIDAS®25:75, EPA Reg. No. 66330-42; MIDAS®EC Gold, EPA Reg. No. 66330-60; and MIDAS®EC Bronze, EPA Reg. No. 66330-58

Mary Waller:

Arysta LifeScience North America LLC, respectfully requests that EPA extend the time-limited registration of Iodomethane Technical, EPA Reg. No. 66330-44; and all associated end use products MIDAS®98:2, EPA Reg. No. 66330-43; MIDAS®50:50, EPA Reg. No. 66330-57; MIDAS®33:67, EPA Reg. No. 66330-59; MIDAS®25:75, EPA Reg. No. 66330-42; MIDAS®EC Gold, EPA Reg. No. 66330-60; and MIDAS®EC Bronze, EPA Reg. No. 66330-58 to December 31, 2013. These registrations currently expire on October 5, 2008.

This date is being proposed as EPA has stated on page 25 of the recently issued draft Reregistration Eligibility Decision (RED) for Chloropicrin dated July 9, 2008 that "*EPA plans to move the soil fumigants forward in Registration Review, from 2017 to 2013, which will allow EPA to consider new data and information relatively soon, determine whether the mitigation included in this decision is effectively addressing the risks as EPA believes it will, and to include other soil fumigants which are not part of the current fumigant group review.*" We believe the date of December 31, 2013 is the most appropriate as iodomethane will be going through a data review at that time along with all other fumigants.

In the interim, Arysta commits to comply with all agreed and appropriate label call-in criteria as determined in the final RED for Chloropicrin as applicable to the premix products containing both chloropicrin and iodomethane.

Please note that MIDAS products are now registered in 46 states in the US, but all of these state registrations are contingent on the US EPA registration being renewed. As we discussed by telephone on August 27, there is some concern from our customers as to whether we will be able to get the product registrations extended. This concern is aided by our competitors. Consequently, Arysta requests that EPA grant an extension for these

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Arysta LifeScience

registrations no later than **September 15, 2008**; in order to avoid a lapsing of the follow-on Iodomethane/MIDAS state registrations.

Thanks in advance for your consideration of this time extension. Should you have any concerns or questions, do not hesitate to contact me at 865-850-3824; or at becky.rhodes@arystalifescience.com.

Sincerely,

Becky Rhodes

Becky Rhodes
Head of Regulatory Affairs

CC: Cynthia Giles-Parker
Kathy Monk
Lois Rossi
Debbie Edwards

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

OCT 11 2007

Ms. Becky Rhodes
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

Subject: Midas 50:50
EPA Registration Number 66330-57
Amendment dated October 11, 2007

Dear Ms. Rhodes:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable. One copy of the label stamped "Accepted" is enclosed for your records. Please submit one copy of the final printed label before the product is released for shipment.

If you have any questions, you may contact me at (703) 308-9354 or via email at waller.mary@epa.gov.

Sincerely,

Mary L. Waller

Mary L. Waller
Product Manager (21)
Fungicide Branch
Registration Division (7505P)

Enclosure

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS® 50:50

Only For Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	49.90%
Chloropicrin	49.75%
OTHER INGREDIENTS:	0.35%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.93 pounds Iodomethane and 7.91 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille.
(If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.

HOT LINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL:
1-866-303-6952 or 1-651-532-8946

NOTE TO PHYSICIAN
Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.

EPA Reg. No. 66330-57
EPA Est. No.

For Product Information Call: 1-866-761-9397

Net Contents:

Manufactured for
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SPECIAL NOTE: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading colorimetric detector devices, such as Kitagawa tubes, certified for chloropicrin at 0.1 to 16 ppm. Persons involved in the application of MIDAS® 50:50 or in reentry into treated fields must wear an air-purifying respirator when required by the restrictions given in the AGRICULTURAL USE REQUIREMENTS section below. In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers (to include tractor drivers, co-pilots, shovelers, and tarp monitors) **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- Full face shield or safety glasses with brow, temple and side protection is required. DO NOT wear goggles.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C) For tractor drivers and co-pilots the following can be used in lieu of an air-purifying respirator:
    - A tractor equipped with a working-area air-fan dilution system consisting of a ducted fan/blower which provides air flow to the breathing zone of the tractor driver and co-pilot. The fan/blower must be mounted so that the fan/blower intake is at least 126 inches from the ground, and the fan/blower must be capable of operating at a minimum of 1,600 revolutions per minute and producing a minimum flow rate of 3,000 cubic feet of air per minute.

Other handlers (to include planters, hole punchers, tarp cutters, tarp removers, and tarp remover drivers) **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- Full face shield or safety glasses with brow, temple and side protection is required. DO NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges, if applicable, shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all cylinder connections and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.
- Check equipment to ensure good condition and integrity prior to each use.

User Safety Requirements

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly outdoors prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.

- Respirator Requirements: When a respirator is required for use with this product, the following criteria must be met consistent with the Worker Protection Standard: (a) Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner; (b) Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (c) Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (d) Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.
- Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only Certified Applicators (certified by both the state and Arysta) trained in the proper handling, worker protection, and application of MIDAS 50:50 soil fumigant and workers under their direct supervision may be present in the treatment area during application. An Arysta and state Certified Applicator must be on site and within the line of sight to observe handlers during the application. Handling tasks to be performed under the direct supervision of a Certified Applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser and shoveler. All such handlers must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Buffer Zone

The area adjacent to the treated area is referred to as the buffer zone. The buffer zone shall extend from the edge of the treated area in all directions. See Buffer Zone Table. The minimum buffer zone distance shall be 25 feet.

The Certified Applicator supervising the soil fumigation is responsible for the following:

1. Calculating the appropriate size of the buffer zone that must be maintained during the first 48 hours following the end of the application;

2. Establishing and maintaining the buffer zone during the 48 hours following the end of the application; and
3. Ensuring that unprotected workers and bystanders do not enter the buffer zone during the 48 hours following the end of the application. Exception: Unprotected workers and bystanders may travel through (but not engage in any activity in) the buffer zone during the 48-hour period, provided their total exposure time in any 24-hour period is 15 minutes or less. However, travel by unprotected workers or bystanders through the fumigated area itself is prohibited during the entire 5-day Entry-Restricted period. Handlers protected with Personal Protective Equipment (PPE) required for early entry into a treated area may work in buffer zones.
4. Ensuring application site has a distinctive buffer zone. The buffer zone of the field to be treated cannot overlap the buffer zone of another field treated within the last 48 hours.

5. The Certified Applicator supervising the soil fumigation must document how the buffer zone was determined, the location of unoccupied sensitive sites within ¼ mile of the fumigated area, and how persons in occupied structures located within the buffer zone were protected. These records must be maintained by the Certified Applicator and by the owner/operator of the fumigated site for at least two years following the fumigation and must be made available, upon request to Federal, State, Tribal, and local enforcement personnel

Determining Buffer Zone Distance

- Determine the size of the buffer zone using the following Buffer Zone Table.
- The size of the buffer zone will be dependant on the following three factors:
  - The number of field acres that are being treated with MIDAS 50:50.
  - The pounds of MIDAS 50:50 that are being applied per treated acre.
  - Buffer zone reduction credits

Buffer Zone Table

MIDAS 50:50 Application Rate (Lbs per Treated Acre)[4]	SIZE OF FIELD IN ACRES (Buffer zone distance in feet)[1, 2]							
	Up to 5 Acres	6 – 10 Acres	11-15 Acres	16- 20 Acres	21-25 Acres	26-30 Acres	31-35 Acres	36-40[3] Acres
125	25	40	75	110	130	145	165	180
150	25	45	90	130	155	175	195	215
175	25	50	100	150	175	200	225	250
200	30	60	120	175	205	235	265	290
210	30	60	120	180	210	240	270	300
240	35	70	140	210	245	280	315	345
300	45	90	175	260	305	345	390	430
350	50	100	200	300	350	400	450	500

1. For rates not listed on this table, use the buffer zone for the next highest rate, or use the following calculation to determine the exact buffer zone:

$$\text{Buffer Zone for Application Rate Not Listed} = \frac{\text{Known Buffer Zone on Table X Application Rate Not Listed}}{\text{Rate of Application for Known Buffer Zone}}$$

2. **Buffer Zone Reduction Credits:**
   Reduce buffer zone by 10% for each factor listed below:
   - Use of flat fume / broadcast application
   - Use of High Barrier films. High Barrier films for which credit can be applied must be on an Arysta approved list. Examples of Arysta approved films are Canslit Brand Metalized 1.3 ml, Pliant Blockade® VIF 1.25 ml, and Pliant Metalized 1.0-1.25.
   - Application to soils having >3% organic matter. Refer to the USDA or USGS Soil Survey Maps for the treated area that identify the range of organic matter and / or a documented soil survey report that lists range of % organic matter for the treated area. Collection of samples for analysis of soil in the treated area should follow procedures as per USDA's Natural Resource Conservation Services methods. Information on soil sampling can be found at www.soil.usda.gov.

   For example, if the Buffer Zone is 50 feet and the application qualifies for a buffer zone reduction credit such as use of Metalized film, then the buffer zone can be reduced by 10%, i.e. reduced by 5 feet based on the following calculation: 50 ft – (50 ft X 10%) = 45 feet.

   If the application qualifies for two buffer zone reduction credits such as use of a high barrier film and soil with >3% organic matter, then the buffer zone can be reduced by 20%, i.e. reduced by 10 feet based on the following calculation: 50 ft – (50 ft X 20%) = 40 feet.

3. Applications are limited to 40 contiguous acres or less per day on a single site.

4. For raised bed applications, the treated area is the raised bed not the untreated furrows. As an example, if a raised bed field is 50% raised bed (treated) and 50% furrow (untreated), and 350 lbs of MIDAS 50:50 is applied to the field, then the effective application rate to the treated raised bed is 350 lbs per treated acre; and that is the rate that would determine the buffer zone.

Note: Minimum allowable buffer zone is 25 feet regardless of buffer zone reduction credits.

Buffer Zone for Pre-Plant Deep Injection Auger

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person, other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling, is PROHIBITED from the start of the application until 5 days after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Early entry under the WPS is limited to tarp inspection and repair. Non-handler entry is prohibited while tarps are being removed.

See the Buffer Zone section of the label for additional Entry Restrictions.

Notification at Entrances to Treated Areas
Notify all workers of the fumigation verbally and by posting warning signs at all likely entrances to the treated area for no less than 5 days after application. The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) MIDAS 50:50
(6) Name, address, and telephone number of the Certified Applicator in charge of the application.

Post these fumigant warning signs for treated areas instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal.

PPE for Reentry during the Entry-Restricted Period
The PPE required for reentry during the entry-restricted period are:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).

GENERAL INFORMATION AND INSTRUCTIONS

This fumigant is a highly hazardous material. All uses of this fumigant are covered under the Worker Protection Standard, and must be conducted in accordance with all of the requirements of the Worker Protection Standard (40 CFR Part 170). It is a restricted use pesticide that must only be used by or under the direct supervision of individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

GENERAL USE PRECAUTIONS

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs.
- Comply with all local ordinances and regulations.
- Do not apply within ¼ mile of any occupied sensitive site such as schools, day care facilities, nursing homes, hospitals, prisons, and playgrounds.
- Applications are limited to 40 contiguous acres or less per day on a single site. .
- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. In addition, consult the local weather forecast in the surrounding region for reports of expected inversion layers the day of application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two trained employees must be present during handling and application of soil fumigants.
- Certified Applicators are responsible for providing information to all workers involved with the fumigation about precautions and procedures in the safe handling, worker protection and application of MIDAS 50:50 for soil fumigation.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers positioned "upwind" from the container and/or where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking.
- For broadcast/flat fume applications, keep all pets, livestock and other domestic animals out of the treated areas until tarps have been removed.
- For raised bed applications, keep all pets, livestock and other domestic animals out of the treated areas for 5 days and until the air concentration for chloropicrin is less than 0.1 ppm at the edge of the treated area. Most raised bed applications will not result in tarp removal.
- Tarp removal requires a minimum of two trained employees to be present during the operation. Non-handler personnel are prohibited from being present during tarp removal.
- See AGRICULTURAL USE REQUIREMENTS box for details regarding posting and placement of warning signs.
- Do not allow entry by unprotected persons into the fumigated area until the re-entry signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 5 days following

application. Signs must remain legible during entire posting period. Also, do not cut tarps for planting until these conditions have been met.

- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site as determined by 3 consecutive measurements taken at the down wind edge of the treated site at least 15 minutes apart.

SPILL AND LEAK PROCEDURES

- Cease all operations if any leak develops in the fumigation system.
- Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind to repair leak(s), if possible.
- For entry into the area to correct the problem, trained personnel must wear loose fitting or well ventilated long-sleeved shirt and long pants, shoes plus socks and either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) or (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipped handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm as specified in section above.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center at 1-800-424-8802.

PROCEDURES PRIOR TO, DURING AND AFTER ALL APPLICATIONS

Control of Soil Borne Pests: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases.

Midas 50:50 will control the following pests when present in soil at the time of treatment:

Weed Seeds, including broadleaf weeds such as nutsedge, pigweed, broomrape and lambsquarters, and grasses such as bermudagrass, and annual bluegrass. Effectiveness against hard seed weeds, such as mallow, dodder, morning glory, and certain leguminous weeds may be variable.

Plant-parasitic Nematodes, such as root-knot, root lesion (meadow), cyst, citrus, burrowing, false root-knot, lance, spiral, ring, sting, stubby root, dagger, awl, sheath and stung (stylet) nematodes.

Soil-borne Insects, such as wireworms, cutworms, grubs, rootworms, ants and garden symphylans.

Soil-borne Diseases, such as *Verticillium*, *Pythium*, *Rhizoctonia*, *Phytophthora*, and *Fusarium*.

MIDAS 50:50 is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

Soil Preparation: The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment. Little or no plant refuse should be present on soil surface. Prior to application, the soil must be sufficiently moistened to allow seeds to swell (imbibe) in preparation for germination.

Prior to All Applications:

- Ensure that application equipment does not contain components made of natural rubber, aluminum, magnesium or their alloys.
- Soil in the treatment area should be reasonably free of trash and in good tilth prior to treatment.
- Do not apply to wet or cold soils (<55°F at a depth of 8 inches).

During All Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Applications:

- To minimize the potential for crop injury, allow the fumigant to dissipate before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin is detectable. See fumigation tables for planting requirements specific to the different application methods.
- Fumigation of highly acidic soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil causing phytotoxicity. Analyze soil following fumigation and fertilize as indicated. Avoid those fertilizers using ammonium salts.

(s)

MIDAS 50:50 PRE-PLANT FIELD FUMIGATION METHODS

Fumigation with MIDAS 50:50 shall only be performed in accordance with the following three application techniques: 1) Raised Bed Application, 2) Broadcast/Flat Fume Application, or 3) Deep Injection Auger Probe Application (stone fruit, nut trees, vines, and field-grown ornamentals only). Application methods and rates of application for each of these methods are discussed in detail below

RAISED BED APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
    - Closing shoes and compaction roller: The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Bed shaper: The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Combination bed former and bed shaper: The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- Planting shall not occur for at least 10 days after application (refer to RAISED BED SOIL FUMIGATION TABLE below).

Application Rates for Raised Bed Fumigation: Rates in the table below are given in pounds of MIDAS 50:50 per broadcast acre.The amount of product applied will be proportionate to the row spacing and width of the raised bed. To calculate the amount of product to be applied, multiply the application rate in lbs MIDAS 50:50/broadcast acre by the appropriate modifier from the Field Rate Modifier Table provided below.

RAISED BED SOIL FUMIGATION TABLE		
Crop	**MIDAS 50:50 Per Broadcast Acre[1]**	**Time Between Application and Planting**
Field-Grown Ornamentals Peppers Strawberries Tomatoes	**Standard Film** 200 - 350 lbs/Broadcast Acre (12.6 – 22 gal/Broadcast Acre)	10 – 14 days[2, 3]
	Highly Retentive Film 150-200 lbs/Broadcast Acre (9.4 – 12.6 gal/Broadcast Acre)	14 - 21 days when using highly retentive film[4, 5]

NOTE:

[1] For fields infested with Nutsedge and Malva, apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50.

[2] Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain or persistence of chloropicrin odor in the soil.

[3] If standard tarpaulins are NOT removed, planting can occur a minimum of 10 days after application, which includes the minimum 24 hours of aeration once the tarps have been cut. If tarpaulins are not cut or aerated prior to planting, the odor of chloropicrin must not be detectable. If odor of chloropicrin is detectable, wait a minimum of 14 days before planting to avoid possible plant injury.

[4] Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for film selection and rate reduction recommendations and approved films.

[5] If highly retentive films are not removed, planting can occur a minimum of 14 days after application, which includes the minimum 24 hours of aeration once the tarps have been cut. If the tarpaulins are not cut or aerated, prior to planting, the odor of chloropicrin must not be detectable. If odor of chloropicrin is detectable, wait a minimum of 21 days before planting to avoid possible plant injury.

Field Rate Modifier Table for Raised Bed Applications

Row Spacing (inches)	**Bed Width** (inches)	**Field Rate Modifier**
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

BROADCAST / FLAT FUME APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface.
    - Closing shoes and compaction roller: The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- Planting shall not occur for at least 10 days after application (refer to BROADCAST / FLAT FUME APPLICATION TABLE).
- This product may be applied by broadcast/flat fume application with standard polyethylene films or highly retentive films, as they become available. Contact your Arysta LifeScience North America representative for information on film selection and rate reduction recommendations.

Application Rates for Broadcast/Flat Fumigation:

BROADCAST/FLAT FUME APPLICATION TABLE		
Crop	**MIDAS 50:50 Per Acre[1]**	**Time Between Application and Planting**
Field-Grown Ornamentals Peppers Strawberries Tomatoes Turf	200 – 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days
Stone Fruits (Apricot, Sweet Cherry, Tart Cherry, Nectarine, Peach, Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot, Fresh Prune) Tree Nuts (Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Black Walnut, English Walnut) Vines (Table, Raisin and Wine Grapes)	240 – 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days[2]
Nurseries (including strawberries, stone fruits, tree nuts and conifer trees)	350 lbs/Acre (22 gal/Acre)	10 – 14 days[2]

NOTE:

[1] For fields infested with Nutsedge and Malva apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50..

[2] If tarpaulins are removed, planting can occur 10 days after application, which includes the minimum 5-day treatment period before tarps are cut plus the minimum of 24 hours of aeration after tarps are cut and before they are removed. Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain or persistence of chloropicrin odor in the soil.

Tarpaulin Cutting and Removal for Broadcast / Flat Fume Applications: Following the completion of the application of MIDAS 50:50, the tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.

If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed (a task which cannot occur until a minimum of 5 days after application, as stated above).

PREPLANT DEEP INJECTION AUGER-PROBE APPLICATION

For Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs, use 1 – 1.5 lbs of MIDAS 50:50 per injection site, typically to a depth of between 18 to 36 inches below the soil surface, though deeper injections may be made as appropriate. Use 1 injection site per 100 square feet (i.e., one injection site every 10 feet in a standard grid pattern). Planting or replanting of Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs may begin 14 days after treatment. DO NOT PLANT if the odor of chloropicrin is detectable.

Do not treat more than 230 trees/shrubs/vines per acre per day.

Buffer Zones

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

FOOD CROP ROTATION RESTRICTIONS

Food crops other than strawberry, tomatoes and peppers require a 4 month plant back rotation restriction from the date of fumigant application. Crop rotation to non-food crops or non-bearing fruit or nut trees is not restricted.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders shall not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers shall never be refilled by the consumer or used for any other product or purpose.

FOR 24-HOUR CHEMICAL EMERGENCY (spill, leak, fire or accident) ASSISTANCE:
Call CHEMTREC at 1-800-424-9300

Warranty and Disclaimer Statement

1. The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America Corporation ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.
2. Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.
3. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.**
4. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARYSTA, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARYSTA'S ELECTION, THE REPLACEMENT OF THE PRODUCT.**

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

ACCEPTED

6/4/2008

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 66330-57

MIDAS® 50:50

FOR SALE AND USE IN STATES OTHER THAN FLORIDA

Only For Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases

ACTIVE INGREDIENTS:

Iodomethane	49.90%
Chloropicrin	49.75%
OTHER INGREDIENTS:	0.35%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.93 pounds Iodomethane and 7.91 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille.
(If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.

HOT LINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL:
1-866-303-6952 or 1-651-632-8946

NOTE TO PHYSICIAN
Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.

EPA Reg. No. 66330-57
EPA Est. No.

For Product Information Call: 1-866-761-9397

Net Contents:

Manufactured for
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS
Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SPECIAL NOTE: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL
Air concentrations of chloropicrin are measured with direct reading colorimetric detector devices, such as Kitagawa tubes, certified for chloropicrin at 0.1 to 16 ppm. Persons involved in the application of MIDAS 50:50 or in reentry into treated fields must wear an air-purifying respirator when required by the restrictions given in the PERSONAL PROTECTIVE EQUIPMENT and AGRICULTURAL USE REQUIREMENTS sections below. In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers (to include tractor drivers, co-pilots, shovelers, cross ditchers, and tarp monitors) present on the application site and within the buffer zone (see exception for transient travel under heading "Buffer Zone") **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C). For tractor drivers and co-pilots the following can be used in lieu of an air-purifying respirator:
    - A tractor equipped with a working-area air-fan dilution system consisting of a ducted fan/blower which provides air flow to the breathing zone of the tractor driver and co-pilot. The fan/blower must be mounted so that the fan/blower intake is at least 126 inches from the ground, and the fan/blower must be capable of operating at a minimum of 1,600 revolutions per minute and producing a minimum flow rate of 3,000 cubic feet of air per minute.
- Full face shield or safety glasses with brow, temple and side protection if the air concentration of chloropicrin is less than 0.1 ppm. If the air concentration of chloropicrin is greater than 0.1 ppm, but less than 4 ppm, wear a full face respirator or face-sealing goggles with a half-face respirator. If the chloropicrin concentration is greater than 4 ppm, then see below.
- A full face respirator of one of the following types **if the air concentration of chloropicrin exceeds 4 PPM**: (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number prefix TC-13F).

Other handlers (to include planters, hole punchers, tarp cutters, tarp removers, and tarp remover drivers) present on the application site from the start of the application until 14 days following the end of the application; and within the buffer zone from the start of the application until 48 hours following the end of the application (see exception for transient travel under heading "Buffer Zone") **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- Full face shield or safety glasses with brow, temple and side protection. DO NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- Hoses between any fumigant container and the flow divider must be Teflon® hoses reinforced with stainless steel wire braid or its equivalent.
- External sight gauges, if applicable, shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all cylinder connections and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.
- Check equipment to ensure good condition and integrity prior to each use.

User Safety Requirements

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly outdoors prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Respirator Requirements: When a respirator is required for use with this product, the following criteria must be met consistent with the Worker Protection Standard: (a) Cartridges or canisters must be replaced when odor or irritation from this product becomes apparent, or after 8 hours of use, whichever is sooner; (b) Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (c) Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (d) Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.
- Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters. Iodomethane has certain properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

To address this concern for ground water quality, for broadcast applications, tarps must be sliced or removed before noon and only when rainfall is not expected with 12 hours. (Falling temperatures typically found in the late afternoon and evening will not promote dissipation of remaining Iodomethane under the sliced tarp and rainfall may cause remaining Iodomethane under the sliced tarp to leach into ground water.) For raised bed applications, rainfall is not a factor since planting occurs with the tarp in place and slicing or removing of tarps occurs after Iodomethane has dissipated.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only Certified Applicators (certified by the state and trained by Arysta) in the proper handling, worker protection, and application of MIDAS 50:50 soil fumigant and handlers under their direct supervision may be present in the treatment area during application. An Arysta trained and state Certified Applicator must be on site and within the line of sight to observe handlers during the application. Handling tasks to be performed under the direct supervision of a Certified Applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser and shoveler. All such handlers must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Buffer Zone

The area adjacent to the treated area is referred to as the buffer zone. The buffer zone shall extend from the edge of the treated area in all directions. See Buffer Zone Table. The minimum buffer zone distance shall be 25 feet.

The Certified Applicator supervising the soil fumigation is responsible for the following:

1. Calculating the appropriate size of the buffer zone that must be maintained from the start of the application until 48 hours following the end of the application;
2. Establishing and maintaining the buffer zone from the start of the application until 48 hours following the end of the application. The Certified Applicator must use an appropriate means to manage and maintain the buffer zone such as posting fumigant warning signs around the perimeter of the buffer zone at potential points of entry, using trained workers to patrol the buffer zone, or other equivalent means. If fumigant warning signs are used, they must be posted from the start of the application until 48 hours following the end of the application and they must include the same warning symbol and statements required for notification warning signs under AGRICULTURAL USE REQUIREMENTS with the exception that signs will indicate "Fumigant Buffer Zone" at the top of the sign and will delete the statement "areas under fumigation". If "Fumigant Buffer Zone" signs are used, the signs must be removed within 3 days of the end of the buffer zone period.
3. Ensuring that unprotected workers and bystanders do not enter the buffer zone from the start of the application until 48 hours following the end of the application. Exception: Unprotected workers and bystanders may travel through (but not engage in any activity in) the buffer zone during the application and the 48-hour period following the end of the application, provided their total exposure time in any 24-hour period is 15 minutes or less. However, travel by unprotected workers or bystanders through the fumigated area itself is prohibited during the entire 5-day Entry-Restricted period. Handlers protected with required Personal Protective Equipment (PPE) may work in buffer zones. See the PERSONAL PROTECTIVE EQUIPMENT section.
4. Ensuring application site has a distinctive buffer zone. The buffer zone of the field to be treated cannot overlap the buffer zone of another field treated within the last 48 hours.
5. Ensuring that there are no occupied nursing homes, hospitals, or prisons; and no occupied licensed schools, licensed day care facilities and licensed assisted living facilities (licensed by state or local governments) within ¼ mile of the fumigated area during the buffer zone period.
6. Documenting how the buffer zone was determined, and providing the information specified below concerning occupied structures located within the buffer zone; and nursing homes, hospitals, or *prisons; or licensed schools, licensed day care facilities, or licensed assisted living facilities* (licensed by state or local governments) within ¼ mile of the fumigated area. Records must include buffer zone calculations; diagrams; and maps. Records must also identify nursing homes, hospitals, or prisons; or licensed schools, licensed day care facilities, or licensed assisted living facilities (licensed by state or local governments) within ¼ mile of the fumigation area, and document how it was determined that such sites would be unoccupied during the application period. These records must be maintained by the Certified Applicator and by the owner/operator of the fumigated site for at least two years following the fumigation and must be made available, upon request to Federal, State, Tribal, and local enforcement personnel.

Determining Buffer Zone Distance

- Determine the size of the buffer zone using the following Buffer Zone Table.
- The size of the buffer zone will be dependant on the following three factors:
  - The number of field acres that are being treated with MIDAS 50:50.
  - The pounds of MIDAS 50:50 that are being applied per treated acre.
  - Buffer zone reduction credits.

Buffer Zone Table

MIDAS 50:50 Application Rate (Lbs per Treated Acre)[4]	SIZE OF FIELD IN ACRES (Buffer zone distance in feet)[1, 2]							
	Up to 5 Acres	6 – 10 Acres	11-15 Acres	16- 20 Acres	21-25 Acres	26-30 Acres	31-35 Acres	36-40[3] Acres
125	25	40	75	110	130	145	165	180
150	25	45	90	130	155	175	195	215
175	25	50	100	150	175	200	225	250
200	30	60	120	175	205	235	265	290
210	30	60	120	180	210	240	270	300
240	35	70	140	210	245	280	315	345
300	45	90	175	260	305	345	390	430
350	50	100	200	300	350	400	450	500

1. For rates not listed on this table, use the buffer zone for the next highest rate, or use the following calculation to determine the exact buffer zone:

$$\text{Buffer Zone for Application Rate Not Listed} = \frac{\text{Known Buffer Zone on Table X Application Rate Not Listed}}{\text{Rate of Application for Known Buffer Zone}}$$

2. **Buffer Zone Reduction Credits:**
   Reduce buffer zone by 10% for each factor listed below:
   - Use of flat fume / broadcast application
   - Use of Highly Retentive films. Highly Retentive films for which credit can be applied must be on an Arysta approved list. Examples of Arysta approved films are Canslit Brand Metalized 1.3 ml, Pliant Blockade® VIF 1.25 ml, and Pliant Metalized 1.0-1.25.
   - Application to soils having >3% organic matter. Refer to the USDA or USGS Soil Survey Maps for the treated area that identify the range of organic matter and / or a documented soil survey report that lists range of % organic matter for the treated area. Collection of samples for analysis of soil in the treated area should follow procedures as per USDA's Natural Resource Conservation Services methods. Information on soil sampling can be found at www.soil.usda.gov.

   For example, if the Buffer Zone is 50 feet and the application qualifies for a buffer zone reduction credit such as use of Metalized film, then the buffer zone can be reduced by 10%, i.e. reduced by 5 feet based on the following calculation: 50 ft – (50 ft X 10%) = 45 feet.

   If the application qualifies for two buffer zone reduction credits such as use of a highly retentive film and soil with >3% organic matter, then the buffer zone can be reduced by 20%, i.e. reduced by 10 feet based on the following calculation: 50 ft – (50 ft X 20%) = 40 feet.

3. Applications are limited to 40 contiguous acres or less per day.

4. For raised bed applications, the treated area is the raised bed not the untreated furrows. As an example, if a raised bed field is 50% raised bed (treated) and 50% furrow (untreated), and 350 lbs of MIDAS 50:50 is applied to the field, then the effective application rate to the treated raised bed is 350 lbs per treated acre; and that is the rate that would determine the buffer zone.

Note: Minimum allowable buffer zone is 25 feet regardless of buffer zone reduction credits.

Buffer Zone for Pre-Plant Deep Injection Auger

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person, other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling, is PROHIBITED from the start of the application until 5 days after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Entry during the 5-day restricted entry period is limited to the handler activities of tarp inspection, tarp repair, and flood prevention (including cross ditching).

See the Buffer Zone section of the label for additional Entry Restrictions.

Notification at Entrances to Treated Areas
Notify all workers of the fumigation verbally and by posting warning signs at all likely entrances to the treated area for no less than 5 days after application. The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) MIDAS 50:50
(6) Name, address, and telephone number of the Certified Applicator in charge of the application.

Post these fumigant warning signs for treated areas instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal.

PPE for Reentry during the Entry-Restricted Period
The PPE required for reentry during the entry-restricted period are:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- Full face shield or safety glasses with brow, temple and side protection if the air concentration of chloropicrin is less than 0.1 ppm. If the air concentration of chloropicrin is greater than 0.1 ppm, but less than 4 ppm, wear a full face respirator or face-sealing goggles with a half-face respirator. If the chloropicrin concentration is greater than 4 ppm, then see below.
- A full face respirator of one of the following types **if the air concentration of chloropicrin exceeds 4 PPM**: (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number prefix TC-13F).

GENERAL INFORMATION AND INSTRUCTIONS

This fumigant is a highly hazardous material. All uses of this fumigant are covered under the Worker Protection Standard, and must be conducted in accordance with all of the requirements of the Worker Protection Standard (40 CFR Part 170). It is a restricted use pesticide that must only be used by Certified Applicators, certified by the state and trained by Arysta, in the proper handling, worker protection, and application of MIDAS 50:50 soil fumigant and handlers under their direct supervision. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

GENERAL USE PRECAUTIONS

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs.
- Comply with all local ordinances and regulations.
- Do not apply within ¼ mile of nursing homes, hospitals or prisons; or licensed schools, licensed day care facilities or licensed assisted living facilities (licensed by state or local governments) that will be occupied during the buffer zone period.
- Applications are limited to 40 contiguous acres or less per day.
- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. In addition, consult the local weather forecast in the surrounding region for reports of expected inversion layers the day of application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two persons must be present during handling and application of soil fumigants. These persons must be Certified Applicators or handlers under their direct supervision and within the line of sight of the Certified Applicator.
- Certified Applicators are responsible for providing information to all handlers involved with the fumigation about precautions and procedures in the safe handling, worker protection and application of MIDAS 50:50 for soil fumigation.
- Additional instructions must be made available to handlers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all handlers positioned "upwind" from the container and/or where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking".
- For broadcast/flat fume applications, keep all pets, livestock and other domestic animals out of the treated areas until tarps have been removed.
- For raised bed applications, keep all pets, livestock and other domestic animals out of the treated areas for 5 days and until the air concentration for chloropicrin is less than 0.1 ppm at the edge of the treated area. Most raised bed applications will not result in tarp removal.
- Tarp removal within 14 days of the start of the application requires a minimum of two trained employees to be present during the operation. Non-handler personnel are prohibited from being present during tarp removal.

- See AGRICULTURAL USE REQUIREMENTS box for details regarding posting and placement of warning signs.
- Do not allow entry by unprotected persons into the fumigated area until the re-entry signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 5 days following application. Signs must remain legible during entire posting period.
- Do not cut standard tarps for planting until the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 5 days following application. In the case of applications using highly retentive films, do not cut tarps until the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 10 days following application.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site as determined by 3 consecutive measurements taken at the down wind edge of the treated site at least 15 minutes apart.

SPILL AND LEAK PROCEDURES

- Cease all operations if any leak develops in the fumigation system.
- Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind to repair leak(s), if possible.
- For entry into the area to correct the problem, trained personnel must wear loose fitting or well ventilated long-sleeved shirt and long pants, shoes plus socks and either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) or (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipped handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm as specified in section above.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center at 1-800-424-8802.

PROCEDURES PRIOR TO, DURING AND AFTER ALL APPLICATIONS

Control of Soil Borne Pests: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases.

MIDAS 50:50 will control the following pests when present in soil at the time of treatment:

Weed Seeds, including broadleaf weeds such as nutsedge, pigweed, broomrape and lambsquarters, and grasses such as bermudagrass, and annual bluegrass. Effectiveness against hard seed weeds, such as mallow, dodder, morning glory, and certain leguminous weeds may be variable.

Plant-parasitic Nematodes, such as root-knot, root lesion (meadow), cyst, citrus, burrowing, false root-knot, lance, spiral, ring, sting, stubby root, dagger, awl, sheath and stung (stylet) nematodes.

Soil-borne Insects, such as wireworms, cutworms, grubs, rootworms, ants and garden symphylans.

Soil-borne Diseases, such as *Verticillium*, *Pythium*, *Rhizoctonia*, *Phytophthora*, and *Fusarium*.

MIDAS 50:50 is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that

could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

Soil Preparation: The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment. Little or no plant refuse should be present on soil surface. Prior to application, the soil must be sufficiently moistened to allow seeds to swell (imbibe) in preparation for germination.

Prior to All Applications:

- Ensure that application equipment does not contain components made of natural rubber, aluminum, magnesium or their alloys.
- Soil in the treatment area should be reasonably free of trash and in good tilth prior to treatment.
- Do not apply when soils are too wet or too dry for good agricultural practices or too hot or too cold (<55°F; or >90°F at a depth of 8 inches).

During All Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Applications:

- To minimize the potential for crop injury, allow the fumigant to dissipate before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. See fumigation tables for planting requirements specific to the different application methods.
- Fumigation of highly acidic soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil causing phytotoxicity. Analyze soil following fumigation and fertilize as indicated. Avoid those fertilizers using ammonium salts.
- For broadcast applications, tarps must be sliced or removed before noon and only when rainfall is not expected within 12 hours. (Falling temperatures typically found in the late afternoon and evening will not promote dissipation of remaining Iodomethane under the sliced tarp and rainfall may cause remaining Iodomethane under the sliced tarp to leach into ground water). For raised bed applications, rainfall is not a factor since planting occurs with the tarp in place and slicing or removing of tarps occurs after Iodomethane has dissipated.

MIDAS 50:50 PRE-PLANT FIELD FUMIGATION METHODS

Fumigation with MIDAS 50:50 shall only be performed in accordance with the following three application techniques: 1) Raised Bed Application, 2) Broadcast/Flat Fume Application, or 3) Deep Injection Auger Probe Application (stone fruit, nut trees, vines, and field-grown ornamentals only). Application methods and rates of application for each of these methods are discussed in detail below.

RAISED BED APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
    - Soil sealing at time of application: The treated ground must be sealed using closing shoes , roller, compaction roller, cultipacker, or other equivalent equipment that will sufficiently cover chisel marks left after soil injection. The equipment shall cover the chisel marks with soil immediately prior to placement of the tarpaulin being laid down_(with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Bed shaper: The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Combination bed former and bed shaper: The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- Planting shall not occur for at least 10 days after application (refer to RAISED BED SOIL FUMIGATION TABLE below).

Application Rates for Raised Bed Fumigation: Rates in the table below are given in pounds of MIDAS 50:50 per broadcast acre.The amount of product applied will be proportionate to the row spacing and width of the raised bed. To calculate the amount of product to be applied, multiply the application rate in lbs MIDAS 50:50/broadcast acre by the appropriate modifier from the Field Rate Modifier Table provided below.

RAISED BED SOIL FUMIGATION TABLE		
Crop	**MIDAS 50:50 Per Broadcast Acre[1]**	**Time Between[2] Application and Planting**
Field-Grown Ornamentals Peppers Strawberries Tomatoes	**Standard Film** 200 - 350 lbs/Broadcast Acre (12.6 – 22 gal/Broadcast Acre)	10 – 14 days[3]
	Highly Retentive Film[4] 150-200 lbs/Broadcast Acre (9.4 – 12.6 gal/Broadcast Acre)	14 - 21 days when using highly retentive film

NOTE:

[1] For fields infested with Nutsedge and Malva, apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50 with standard film and 160 lbs/acre (10.1 gal/acre) with highly retentive film.

[2] If tarps are cut for removal before planting, aerate a minimum of 24 hours after tarps are cut before removing tarps. Wait at least 5 days after application before cutting standard tarps. Wait at least 10 days after application before cutting highly retentive films.

[3] Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain.

[4] Contact your Arysta LifeScience representative for film selection and rate reduction recommendations and approved films.

Field Rate Modifier Table for Raised Bed Applications

Row Spacing (inches)	**Bed Width** (inches)	**Field Rate Modifier**
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

BROADCAST / FLAT FUME APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface.
    - Soil sealing at time of application: The treated ground must be sealed using closing shoes, roller, compaction roller, cultipacker or other equivalent equipment that will sufficiently cover chisel marks left after soil injection. The equipment shall cover the chisel marks with soil immediately prior to placement of the tarpaulin being laid down_(with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- Planting shall not occur for at least 10 days after application

- This product may be applied by broadcast/flat fume application with standard films at rates in the following table:

APPLICATION RATES FOR BROADCAST/FLAT FUME FUMIGATION WITH STANDARD FILMS		
Crop	**MIDAS 50:50 Per Acre[1]**	**Time Between Application and Planting[2]**
Field-Grown Ornamentals Peppers Strawberries Tomatoes Turf	200 – 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days
Stone Fruits (Apricot, Sweet Cherry, Tart Cherry, Nectarine, Peach, Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot, Fresh Prune) Tree Nuts (Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Black Walnut, English Walnut) Vines (Table, Raisin and Wine Grapes)	240 – 350 lbs/Acre (15.1 – 22 gal/Acre)	10 – 14 days
Nurseries (including strawberries, stone fruits, tree nuts and conifer trees)	350 lbs/Acre (22 gal/Acre)	10 – 14 days
NOTE: [1] For fields infested with Nutsedge and Malva apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50. [2] Wait at least 5 days after application before cutting tarps. Aerate a minimum of 24 hours after tarps are cut before removing tarps. Use the longer planting interval under conditions of high soil moisture, heavy soils, or rain.		

Application Rates for Broadcast/Flat Fume Fumigation with Highly Retentive Films

Contact your Arysta LifeScience North America representative for information on film selection and rate reduction recommendations for highly retentive film. Applications using highly retentive film shall not exceed 200 lbs/Acre (12.6 gal/Acre).

Cutting and Removal of Highly Retentive Films for Broadcast/Flat Fume Applications

- Do not cut highly retentive films until at least 10 days following the application. Wait a minimum of 14 days after application before planting.
- When tarpaulins are removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed (a task which cannot occur until a minimum of 10 days after application, as stated above).
- Planting shall not occur for at least 14 days after application.

PREPLANT DEEP INJECTION AUGER-PROBE APPLICATION

For Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs, use 1 – 1.5 lbs of MIDAS 50:50 per injection site, typically to a depth of between 18 to 36 inches below the soil surface, though deeper injections may be made as appropriate. Use 1 injection site per 100 square feet (i.e., one injection site every 10 feet in a standard grid pattern). Planting or replanting of Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs may begin 14 days after treatment. DO NOT PLANT if the odor of chloropicrin is detectable.

Do not treat more than 230 trees/shrubs/vines per acre per day.

Buffer Zones

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

ROTATIONAL CROPS

There are no crop rotation restrictions.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders shall not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers shall never be refilled by the consumer or used for any other product or purpose.

FOR 24-HOUR CHEMICAL EMERGENCY (spill, leak, fire or accident) ASSISTANCE:
Call CHEMTREC at 1-800-424-9300

Warranty and Disclaimer Statement

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America Corporation ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARYSTA, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARYSTA'S ELECTION, THE REPLACEMENT OF THE PRODUCT.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Ms. Becky Rhodes
Head of Regulatory Affairs
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, North Carolina 27513

JUN 4 2008

Subject: Midas 50:50
EPA Registration No. 66330-57
Amendment dated June 4, 2008

Dear Ms. Rhodes:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable. One copy of the label stamped "Accepted" is enclosed for your records. Please submit one copy of the final printed label before the product is released for shipment.

If you have any questions, please contact Tamue L. Gibson by phone at (703) 305-9096 or via email at gibson.tamue@epa.gov

Sincerely,

Mary L. Waller

Mary L. Waller
Product Manager (21)
Fungicide Branch
Registration Division (7505P)

Enclosure

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For [illegible] and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS® 50:50

FOR SALE AND USE IN FLORIDA ONLY

Only For Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases

ACTIVE INGREDIENTS:

Iodomethane	49.90%
Chloropicrin	49.75%
OTHER INGREDIENTS:	0.35%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.93 pounds Iodomethane and 7.91 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille.
(If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.

HOT LINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL:
1-866-303-6952 or 1-651-632-8946

NOTE TO PHYSICIAN
Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.

EPA Reg. No. 66330-57
EPA Est. No.

For Product Information Call: 1-866-761-9397

Net Contents:

Manufactured for
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS
Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SPECIAL NOTE: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL
Air concentrations of chloropicrin are measured with direct reading colorimetric detector devices, such as Kitagawa tubes, certified for chloropicrin at 0.1 to 16 ppm. Persons involved in the application of MIDAS 50:50 or in reentry into treated fields must wear an air-purifying respirator when required by the restrictions given in the PERSONAL PROTECTIVE EQUIPMENT and AGRICULTURAL USE REQUIREMENTS sections below. In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers (to include tractor drivers, co-pilots, shovelers, cross ditchers, and tarp monitors) present on the application site and within the buffer zone (see exception for transient travel under heading "Buffer Zone") **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- Full face shield or safety glasses with brow, temple and side protection if the air concentration of chloropicrin is less than 0.1 ppm. If the air concentration of chloropicrin is greater than 0.1 ppm, but less than 4 ppm, wear a full face respirator or face-sealing goggles with a half-face respirator. If the chloropicrin concentration is greater than 4 ppm, then see below.
- A full face respirator of one of the following types **if the air concentration of chloropicrin exceeds 4 PPM**: (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number prefix TC-13F).

Other handlers (to include planters, hole punchers, tarp cutters, tarp removers, and tarp remover drivers) present on the application site from the start of the application until 14 days following the end of the application; and within the buffer zone from the start of the application until 48 hours following the end of the application (see exception for transient travel under heading "Buffer Zone") **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- Full face shield or safety glasses with brow, temple and side protection. DO NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- Hoses between any fumigant container and the flow divider must be Teflon® hoses reinforced with stainless steel wire braid or its equivalent.
- External sight gauges, if applicable, shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all cylinder connections and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.
- Check equipment to ensure good condition and integrity prior to each use.

User Safety Requirements

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.

- Aerate all affected clothing thoroughly outdoors prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Respirator Requirements: When a respirator is required for use with this product, the following criteria must be met consistent with the Worker Protection Standard: (a) Cartridges or canisters must be replaced when odor or irritation from this product becomes apparent, or after 8 hours of use, whichever is sooner; (b) Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (c) Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (d) Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.
- Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters. Iodomethane has certain properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

To address this concern for ground water quality, for broadcast applications, tarps must be sliced or removed before noon and only when rainfall is not expected within 12 hours. (Falling temperatures typically found in the late afternoon and evening will not promote dissipation of remaining Iodomethane under the sliced tarp and rainfall may cause remaining Iodomethane under the sliced tarp to leach into ground water.) For raised bed applications, rainfall is not a factor since planting occurs with the tarp in place and slicing or removing of tarps occurs after Iodomethane has dissipated.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only Certified Applicators (certified by the state and trained by Arysta) in the proper handling, worker protection, and application of MIDAS 50:50 soil fumigant and handlers under their direct supervision may be present in the treatment area during application. An Arysta trained and state Certified Applicator must be on site and within the line of sight to observe handlers during the application. Handling tasks to be performed under the direct supervision of a Certified Applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser and shoveler. All such handlers must have appropriate protective

equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Buffer Zone

The area adjacent to the treated area is referred to as the buffer zone. The buffer zone shall extend from the edge of the treated area in all directions. See Buffer Zone Table. The minimum buffer zone distance shall be 25 feet.

The Certified Applicator supervising the soil fumigation is responsible for the following:

1. Calculating the appropriate size of the buffer zone that must be maintained from the start of the application until 48 hours following the end of the application;
2. Establishing and maintaining the buffer zone from the start of the application until 48 hours following the end of the application. Buffer zones must be on the property under the control of the Certified Applicator and must not include property that is not under the control of the Certified Applicator unless written permission is obtained prior to fumigation, including signature, from responsible parties from all properties that will be included or partially included in the buffer zone. Buffer zones shall not extend onto public roads or areas, or onto any other land for which written consent is not attainable. The Certified Applicator must use an appropriate means to manage and maintain the buffer zone such as posting fumigant warning signs around the perimeter of the buffer zone at potential points of entry, using trained workers to patrol the buffer zone, or other equivalent means. If fumigant warning signs are used, they must be posted from the start of the application until 48 hours following the end of the application and they must include the same warning symbol and statements required for notification warning signs under AGRICULTURAL USE REQUIREMENTS with the exception that signs will indicate "Fumigant Buffer Zone" at the top of the sign and will delete the statement "areas under fumigation". If "Fumigant Buffer Zone" signs are used, the signs must be removed within 3 days of the end of the buffer zone period.
3. Ensuring that unprotected workers and bystanders do not enter the buffer zone from the start of the application until 48 hours following the end of the application. Exception: Unprotected workers and bystanders may travel through (but not engage in any activity in) the buffer zone during the application and the 48-hour period following the end of the application, provided their total exposure time in any 24-hour period is 15 minutes or less. However, travel by unprotected workers or bystanders through the fumigated area itself is prohibited during the entire 5-day Entry-Restricted period. Handlers protected with required Personal Protective Equipment (PPE) may work in buffer zones. See the PERSONAL PROTECTIVE EQUIPMENT section.
4. Ensuring application site has a distinctive buffer zone. The buffer zone of the field to be treated cannot overlap the buffer zone of another field treated within the last 48 hours.
5. Ensuring that there are no occupied nursing homes, hospitals, or prisons; and no occupied licensed schools, licensed day care facilities and licensed assisted living facilities (licensed by state or local governments) within ¼ mile of the fumigated area during the buffer zone period.
6. Documenting how the buffer zone was determined, and providing the information specified below concerning occupied structures located within the buffer zone; and nursing homes, hospitals, or prisons; or licensed schools, licensed day care facilities, or licensed assisted living facilities (licensed by state or local governments) within ¼ mile of the fumigated area. Records must include buffer zone calculations; diagrams; maps; and the dates and times people left occupied structures within the buffer zone; and when they were allowed to return to such structures. Records must include any consent documentation signed by parties whose properties were outside the control of the Certified Applicator but were included in the buffer zone. Records must also identify nursing homes, hospitals, or prisons; or licensed schools, licensed day care facilities, or licensed assisted living facilities (licensed by state or local governments) within ¼ mile of the fumigation area, and document how it was determined that such sites would be unoccupied during the application period. These records must be maintained by the Certified Applicator and by the owner/operator of the fumigated site for at least two years following the fumigation and must be made available, upon request to Federal, State, Tribal, and local enforcement personnel.

Determining Buffer Zone Distance

- Determine the size of the buffer zone using the following Buffer Zone Table.
- The size of the buffer zone will be dependant on the following three factors:
  - The number of field acres that are being treated with MIDAS 50:50.
  - The pounds of MIDAS 50:50 that are being applied per treated acre.
  - Buffer zone reduction credits.

Buffer Zone Table

MIDAS 50:50 Application Rate (Lbs per Treated Acre)[4]	SIZE OF FIELD IN ACRES (Buffer zone distance in feet)[1, 2]							
	Up to 5 Acres	6 – 10 Acres	11-15 Acres	16- 20 Acres	21-25 Acres	26-30 Acres	31-35 Acres	36-40[3] Acres
125	25	40	75	110	130	145	165	180
150	25	45	90	130	155	175	195	215
175	25	50	100	150	175	200	225	250
200	30	60	120	175	205	235	265	290
210	30	60	120	180	210	240	270	300
240	35	70	140	210	245	280	315	345
300	45	90	175	260	305	345	390	430
350	50	100	200	300	350	400	450	500

1. For rates not listed on this table, use the buffer zone for the next highest rate, or use the following calculation to determine the exact buffer zone:

   Buffer Zone for Application Rate Not Listed = Known Buffer Zone on Table X Application Rate Not Listed / Rate of Application for Known Buffer Zone

2. **Buffer Zone Reduction Credits:**
   Reduce buffer zone by 10% for each factor listed below:
   - Use of flat fume / broadcast application
   - Use of highly retentive films. Highly retentive films for which credit can be applied must be on an Arysta approved list. Examples of Arysta approved films are Canslit Brand Metalized 1.3 ml, Pliant Blockade® VIF 1.25 ml, and Pliant Metalized 1.0-1.25.
   - Application to soils having >3% organic matter. Refer to the USDA or USGS Soil Survey Maps for the treated area that identify the range of organic matter and / or a documented soil survey report that lists range of % organic matter for the treated area. Collection of samples for analysis of soil in the treated area should follow procedures as per USDA's Natural Resource Conservation Services methods. Information on soil sampling can be found at www.soil.usda.gov.

   For example, if the Buffer Zone is 50 feet and the application qualifies for a buffer zone reduction credit such as use of highly retentive film, then the buffer zone can be reduced by 10%, i.e. reduced by 5 feet based on the following calculation: 50 ft – (50 ft X 10%) = 45 feet.

   If the application qualifies for two buffer zone reduction credits such as use of a highly retentive film and soil with >3% organic matter, then the buffer zone can be reduced by 20%, i.e. reduced by 10 feet based on the following calculation: 50 ft – (50 ft X 20%) = 40 feet.

3. Applications are limited to 40 contiguous acres or less per day.

4. For raised bed applications, the treated area is the raised bed not the untreated furrows. As an example, if a raised bed field is 50% raised bed (treated) and 50% furrow (untreated), and 350 lbs of MIDAS 50:50 is applied to the field, then the effective application rate to the treated raised bed is 350 lbs per treated acre; and that is the rate that would determine the buffer zone.

Note: Minimum allowable buffer zone is 25 feet regardless of buffer zone reduction credits.

Buffer Zone for Pre-Plant Deep Injection Auger

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person, other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling, is PROHIBITED from the start of the application until 5 days after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Entry during the 5-day restricted entry period is limited to the handler activities of tarp inspection, tarp repair, and flood prevention (including cross ditching).

See the Buffer Zone section of the label for additional Entry Restrictions.

Notification at Entrances to Treated Areas
Notify all workers of the fumigation verbally and by posting warning signs at all likely entrances to the treated area for no less than 5 days after application. The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) MIDAS 50:50
(6) Name, address, and telephone number of the Certified Applicator in charge of the application.

Post these fumigant warning signs for treated areas instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal.

PPE for Reentry during the Entry-Restricted Period
The PPE required for reentry during the entry-restricted period are:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- Full face shield or safety glasses with brow, temple and side protection if the air concentration of chloropicrin is less than 0.1 ppm. If the air concentration of chloropicrin is greater than 0.1 ppm, but less than 4 ppm, wear a full face respirator or face-sealing goggles with a half-face respirator. If the chloropicrin concentration is greater than 4 ppm, then see below.
- A full face respirator of one of the following types **if the air concentration of chloropicrin exceeds 4 PPM**: (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number prefix TC-13F).

GENERAL INFORMATION AND INSTRUCTIONS

This fumigant is a highly hazardous material. All uses of this fumigant are covered under the Worker Protection Standard, and must be conducted in accordance with all of the requirements of the Worker Protection Standard (40 CFR Part 170). It is a restricted use pesticide that must only be used by Certified Applicators, certified by the state and trained by Arysta, in the proper handling, worker protection, and application of MIDAS 50:50 soil fumigant and handlers under their direct supervision. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

GENERAL USE PRECAUTIONS

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs.
- Comply with all local ordinances and regulations.
- Do not apply within ¼ mile of nursing homes, hospitals or prisons; or licensed schools, licensed day care facilities or licensed assisted living facilities (licensed by state or local governments) that will be occupied during the buffer zone period.
- Applications are limited to 40 contiguous acres or less per day.
- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. In addition, consult the local weather forecast in the surrounding region for reports of expected inversion layers the day of application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two persons must be present during handling and application of soil fumigants. These persons must be Certified Applicators or handlers under the direct supervision and within the line of sight of a Certified Applicator.
- Certified Applicators are responsible for providing information to all handlers involved with the fumigation about precautions and procedures in the safe handling, worker protection and application of MIDAS 50:50 for soil fumigation.
- Additional instructions must be made available to handlers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all handlers positioned "upwind" from the container and/or where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking".
- For broadcast/flat fume applications, keep all pets, livestock and other domestic animals out of the treated areas until tarps have been removed.
- For raised bed applications, keep all pets, livestock and other domestic animals out of the treated areas for 5 days and until the air concentration for chloropicrin is less than 0.1 ppm at the edge of the treated area. Most raised bed applications will not result in tarp removal.
- Tarp removal within 14 days of the start of the application requires a minimum of two trained employees to be present during the operation. Non-handler personnel are prohibited from being present during tarp removal.

- See AGRICULTURAL USE REQUIREMENTS box for details regarding posting and placement of warning signs.
- Do not allow entry by unprotected persons into the fumigated area until the re-entry signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 5 days following application. Signs must remain legible during entire posting period.
- Do not cut standard tarps for planting until the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 5 days following application. In the case of applications using highly retentive films, do not cut tarps until the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 10 days following application.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site as determined by 3 consecutive measurements taken at the down wind edge of the treated site at least 15 minutes apart.

SPILL AND LEAK PROCEDURES

- Cease all operations if any leak develops in the fumigation system.
- Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind to repair leak(s), if possible.
- For entry into the area to correct the problem, trained personnel must wear loose fitting or well ventilated long-sleeved shirt and long pants, shoes plus socks and either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) or (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipped handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm as specified in section above.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center at 1-800-424-8802.

PROCEDURES PRIOR TO, DURING AND AFTER ALL APPLICATIONS

Control of Soil Borne Pests: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases.

MIDAS 50:50 will control the following pests when present in soil at the time of treatment:

Weed Seeds, including broadleaf weeds such as nutsedge, pigweed, broomrape and lambsquarters, and grasses such as bermudagrass, and annual bluegrass. Effectiveness against hard seed weeds, such as mallow, dodder, morning glory, and certain leguminous weeds may be variable.

Plant-parasitic Nematodes, such as root-knot, root lesion (meadow), cyst, citrus, burrowing, false root-knot, lance, spiral, ring, sting, stubby root, dagger, awl, sheath and stung (stylet) nematodes.

Soil-borne Insects, such as wireworms, cutworms, grubs, rootworms, ants and garden symphylans.

Soil-borne Diseases, such as *Verticillium*, *Pythium*, *Rhizoctonia*, *Phytophthora*, and *Fusarium*.

MIDAS 50:50 is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that

could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

Soil Preparation: The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment. Little or no plant refuse should be present on soil surface. Prior to application, the soil must be sufficiently moistened to allow seeds to swell (imbibe) in preparation for germination.

Prior to All Applications:

- Ensure that application equipment does not contain components made of natural rubber, aluminum, magnesium or their alloys.
- Soil in the treatment area should be reasonably free of trash and in good tilth prior to treatment.
- Do not apply when soils are too wet or too dry for good agricultural practices or too hot or too cold (<55°F; or >90°F at a depth of 8 inches).

During All Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Applications:

- To minimize the potential for crop injury, allow the fumigant to dissipate before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. See fumigation tables for planting requirements specific to the different application methods.
- Fumigation of highly acidic soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil causing phytotoxicity. Analyze soil following fumigation and fertilize as indicated. Avoid those fertilizers using ammonium salts.
- For broadcast applications, tarps must be sliced or removed before noon and only when rainfall is not expected within 12 hours. (Falling temperatures typically found in the late afternoon and evening will not promote dissipation of remaining Iodomethane under the sliced tarp and rainfall may cause remaining Iodomethane under the sliced tarp to leach into ground water.) For raised bed applications, rainfall is not a factor since planting occurs with the tarp in place and slicing or removing of tarps occurs after Iodomethane has dissipated.

MIDAS 50:50 PRE-PLANT FIELD FUMIGATION METHODS

Fumigation with MIDAS 50:50 shall only be performed in accordance with the following three application techniques: 1) Raised Bed Application, 2) Broadcast/Flat Fume Application, or 3) Deep Injection Auger Probe Application (stone fruit, nut trees, vines, and field-grown ornamentals only). Application methods and rates of application for each of these methods are discussed in detail below.

RAISED BED APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
    - Soil sealing at time of application: The treated ground must be sealed using closing shoes , roller, compaction roller, cultipacker, or other equivalent equipment that will sufficiently cover chisel marks left after soil injection. The equipment shall cover the chisel marks with soil immediately prior to placement of the tarpaulin being laid down (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Bed shaper: The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Combination bed former and bed shaper: The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- Planting shall not occur for at least 10 days after application (refer to RAISED BED SOIL FUMIGATION TABLE below).

Application Rates for Raised Bed Fumigation: Rates in the table below are given in pounds of MIDAS 50:50 per broadcast acre.The amount of product applied will be proportionate to the row spacing and width of the raised bed. To calculate the amount of product to be applied, multiply the application rate in lbs MIDAS 50:50/broadcast acre by the appropriate modifier from the Field Rate Modifier Table provided below.

RAISED BED SOIL FUMIGATION TABLE		
Crop	**MIDAS 50:50 Per Broadcast Acre[1]**	**Time Between[2] Application and Planting**
Field-Grown Ornamentals Peppers Strawberries Tomatoes	**Standard Film** 200 - 350 lbs/Broadcast Acre (12.6 – 22 gal/Broadcast Acre)	10 – 14 days[3]
	Highly Retentive Film[4] 150-200 lbs/Broadcast Acre (9.4 – 12.6 gal/Broadcast Acre)	14 - 21 days when using highly retentive film

NOTE:

[1] For fields infested with Nutsedge and Malva, apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50 with standard film and 160 lbs/acre (10.1 gal/acre) with highly retentive film.

[2] If tarps are cut for removal before planting, aerate a minimum of 24 hours after tarps are cut before removing tarps. Wait at least 5 days after application before cutting standard tarps. Wait at least 10 days after application before cutting highly retentive films.

[3] Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain.

[4] Contact your Arysta LifeScience representative for film selection and rate reduction recommendations and approved films.

Field Rate Modifier Table for Raised Bed Applications

Row Spacing (inches)	**Bed Width** (inches)	**Field Rate Modifier**
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

BROADCAST / FLAT FUME APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface.
    - Soil sealing at time of application: The treated ground must be sealed using closing shoes, roller, compaction roller, cultipacker or other equivalent equipment that will sufficiently cover chisel marks left after soil injection. The equipment shall cover the chisel marks with soil immediately prior to placement of the tarpaulin being laid down (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- Planting shall not occur for at least 10 days after application

This product may be applied by broadcast/flat fume application with standard films at rates in the following table:

APPLICATION RATES FOR BROADCAST/FLAT FUME FUMIGATION WITH STANDARD FILMS

Crop	MIDAS 50:50 Per Acre[1]	Time Between Application and Planting[2]
Field-Grown Ornamentals Peppers Strawberries Tomatoes Turf	200 – 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days
Stone Fruits (Apricot, Sweet Cherry, Tart Cherry, Nectarine, Peach, Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot, Fresh Prune) Tree Nuts (Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Black Walnut, English Walnut) Vines (Table, Raisin and Wine Grapes)	240 – 350 lbs/Acre (15.1 – 22 gal/Acre)	10 – 14 days
Nurseries (including strawberries, stone fruits, tree nuts and conifer trees)	350 lbs/Acre (22 gal/Acre)	10 – 14 days

NOTE:

[1] For fields infested with Nutsedge and Malva apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50.

[2] Wait at least 5 days after application before cutting tarps. Aerate a minimum of 24 hours after tarps are cut before removing tarps. Use the longer planting interval under conditions of high soil moisture, heavy soils, or rain.

Application Rates for Broadcast/Flat Fume Fumigation with Highly Retentive Films

Contact your Arysta LifeScience North America representative for information on film selection and rate reduction recommendations for highly retentive film. Applications using highly retentive film shall not exceed 200 lbs/Acre (12.6 gal/Acre).

Cutting and Removal of Highly Retentive Films for Broadcast/Flat Fume Applications

- Do not cut highly retentive films until at least 10 days following the application. Wait a minimum of 14 days after application before planting.

- When tarpaulins are removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed (a task which cannot occur until a minimum of 10 days after application, as stated above).
- Planting shall not occur for at least 14 days after application.

PREPLANT DEEP INJECTION AUGER-PROBE APPLICATION

For Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs, use 1 – 1.5 lbs of MIDAS 50:50 per injection site, typically to a depth of between 18 to 36 inches below the soil surface, though deeper injections may be made as appropriate. Use 1 injection site per 100 square feet (i.e., one injection site every 10 feet in a standard grid pattern). Planting or replanting of Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs may begin 14 days after treatment. DO NOT PLANT if the odor of chloropicrin is detectable.

Do not treat more than 230 trees/shrubs/vines per acre per day.

Buffer Zones

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

ROTATIONAL CROPS

There are no crop rotation restrictions.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders shall not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers shall never be refilled by the consumer or used for any other product or purpose.

FOR 24-HOUR CHEMICAL EMERGENCY (spill, leak, fire or accident) ASSISTANCE:
Call CHEMTREC at 1-800-424-9300

Warranty and Disclaimer Statement

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America Corporation ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARYSTA, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARYSTA'S ELECTION, THE REPLACEMENT OF THE PRODUCT.

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
66330-57	OCT 5 2007

Term of Issuance:
10/5/2008

Name of Pesticide Product:
MIDAS™ 50:50

Name and Address of Registrant (include ZIP Code):

Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA Sec. 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.
2. Make the following label change: Add the phrase "EPA Registration Number 66330-57".
3. Satisfy any additional data requirements and add any additional risk mitigation as required by the Agency once the Agency makes a decision for the soil fumigant group.
4. Submit a label amendment within the same timeframe imposed on other soil fumigant registrants for similar label amendments.
5. Submit one copy of the final printed label before the product is released for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

Signature of Approving Official:
Mary L. Waller
Mary L. Waller, Product Manager (21)
Fungicide Branch, Registration Division (7505P)

Date:
10/5/2007

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS® 50:50

Only For Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	49.90%
Chloropicrin	49.75%
OTHER INGREDIENTS:	0.35%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.93 pounds Iodomethane and 7.91 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille.
(If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.

HOT LINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL:
1-866-303-6952 or 1-651-532-8946

ACCEPTED
with COMMENTS
In EPA Letter Dated:
10/5/2007

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 66330-57

NOTE TO PHYSICIAN
Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.

EPA Reg. No. 66330-
EPA Est. No.

For Product Information Call: 1-866-761-9397

Net Contents:

Manufactured for
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SPECIAL NOTE: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading colorimetric detector devices, such as Kitagawa tubes, certified for chloropicrin at 0.1 to 16 ppm. Persons involved in the application of MIDAS® 50:50 or in reentry into treated fields must wear an air-purifying respirator when required by the restrictions given in the AGRICULTURAL USE REQUIREMENTS section below. In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers (to include tractor drivers, co-pilots, shovelers, and tarp monitors) **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- Full face shield or safety glasses with brow, temple and side protection is required. DO NOT wear goggles.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C) For tractor drivers and co-pilots the following can be used in lieu of an air-purifying respirator:
    - A tractor equipped with a working-area air-fan dilution system consisting of a ducted fan/blower which provides air flow to the breathing zone of the tractor driver and co-pilot. The fan/blower must be mounted so that the fan/blower intake is at least 126 inches from the ground, and the fan/blower must be capable of operating at a minimum of 1,600 revolutions per minute and producing a minimum flow rate of 3,000 cubic feet of air per minute.

Applicators and other handlers (to include drip applicators, drip line tenders, planters, hole punchers, tarp cutters, tarp removers, and tarp remover drivers) **must wear**:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- Full face shield or safety glasses with brow, temple and side protection is required. DO NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges, if applicable, shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all cylinder connections and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.
- Check equipment to ensure good condition and integrity prior to each use.

User Safety Requirements

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly outdoors prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.

- Respirator Requirements: When a respirator is required for use with this product, the following criteria must be met consistent with the Worker Protection Standard: (a) Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner; (b) Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (c) Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (d) Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.
- Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only Certified Applicators (certified by both the state and Arysta) trained in the proper handling, worker protection, and application of MIDAS 50:50 soil fumigant and workers under their direct supervision may be present in the treatment area during application. An Arysta and state Certified Applicator must be on site and within the line of sight to observe handlers during the application. Handling tasks to be performed under the direct supervision of a Certified Applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser and shoveler. All such handlers must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Buffer Zone

The area adjacent to the treated area is referred to as the buffer zone. The buffer zone shall extend from the edge of the treated area in all directions. See Buffer Zone Table. The minimum buffer zone distance shall be 25 feet.

The Certified Applicator supervising the soil fumigation is responsible for the following:

1. Calculating the appropriate size of the buffer zone that must be maintained during the first 48 hours following the end of the application;

2. Establishing and maintaining the buffer zone during the 48 hours following the end of the application; and
3. Ensuring that unprotected workers and bystanders do not enter the buffer zone during the 48 hours following the end of the application. Exception: Unprotected workers and bystanders may travel through (but not engage in any activity in) the buffer zone during the 48-hour period, provided their total exposure time in any 24-hour period is 15 minutes or less. However, travel by unprotected workers or bystanders through the fumigated area itself is prohibited during the entire 5-day Entry-Restricted period. Handlers protected with Personal Protective Equipment (PPE) required for early entry into a treated area may work in buffer zones.
4. Ensuring application site has a distinctive buffer zone. The buffer zone of the field to be treated cannot overlap the buffer zone of another field treated within the last 48 hours.

5. The Certified Applicator supervising the soil fumigation must document how the buffer zone was determined, the location of unoccupied sensitive sites within ¼ mile of the fumigated area, and how persons in occupied structures located within the buffer zone were protected. These records must be maintained by the Certified Applicator and by the owner/operator of the fumigated site for at least two years following the fumigation and must be made available, upon request to Federal, State, Tribal, and local enforcement personnel

Determining Buffer Zone Distance

- Determine the size of the buffer zone using the following Buffer Zone Table.
- The size of the buffer zone will be dependant on the following three factors:
  - The number of field acres that are being treated with MIDAS 50:50.
  - The pounds of MIDAS 50:50 that are being applied per treated acre.
  - Buffer zone reduction credits

Buffer Zone Table

MIDAS 50:50 Application Rate (Lbs per Treated Acre)[4]	SIZE OF FIELD IN ACRES (Buffer zone distance in feet)[1, 2]							
	Up to 5 Acres	6 – 10 Acres	11-15 Acres	16- 20 Acres	21-25 Acres	26-30 Acres	31-35 Acres	36-40[3] Acres
125	25	40	75	110	130	145	165	180
150	25	45	90	130	155	175	195	215
175	25	50	100	150	175	200	225	250
200	30	60	120	175	205	235	265	290
210	30	60	120	180	210	240	270	300
240	35	70	140	210	245	280	315	345
300	45	90	175	260	305	345	390	430
350	50	100	200	300	350	400	450	500

1. For rates not listed on this table, use the buffer zone for the next highest rate, or use the following calculation to determine the exact buffer zone:

$$\text{Buffer Zone for Application Rate Not Listed} = \frac{\text{Known Buffer Zone on Table X Application Rate Not Listed}}{\text{Rate of Application for Known Buffer Zone}}$$

2. **Buffer Zone Reduction Credits:**
   Reduce buffer zone by 10% for each factor listed below:
   - Use of flat fume / broadcast application
   - Use of High Barrier films. High Barrier films for which credit can be applied must be on an Arysta approved list. Examples of Arysta approved films are Canslit Brand Metalized 1.3 ml, Pliant Blockade® VIF 1.25 ml, and Pliant Metalized 1.0-1.25.
   - Application to soils having >3% organic matter. Refer to the USDA or USGS Soil Survey Maps for the treated area that identify the range of organic matter and / or a documented soil survey report that lists range of % organic matter for the treated area. Collection of samples for analysis of soil in the treated area should follow procedures as per USDA's Natural Resource Conservation Services methods. Information on soil sampling can be found at www.soil.usda.gov.

   For example, if the Buffer Zone is 50 feet and the application qualifies for a buffer zone reduction credit such as use of Metalized film, then the buffer zone can be reduced by 10%, i.e. reduced by 5 feet based on the following calculation: 50 ft – (50 ft X 10%) = 45 feet.

   If the application qualifies for two buffer zone reduction credits such as use of a high barrier film and soil with >3% organic matter, then the buffer zone can be reduced by 20%, i.e. reduced by 10 feet based on the following calculation: 50 ft – (50 ft X 20%) = 40 feet.

3. Applications are limited to 40 contiguous acres or less per day on a single site.

4. For raised bed applications, the treated area is the raised bed not the untreated furrows. As an example, if a raised bed field is 50% raised bed (treated) and 50% furrow (untreated), and 350 lbs of MIDAS 50:50 is applied to the field, then the effective application rate to the treated raised bed is 350 lbs per treated acre; and that is the rate that would determine the buffer zone.

Note: Minimum allowable buffer zone is 25 feet regardless of buffer zone reduction credits.

Buffer Zone for Pre-Plant Deep Injection Auger

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person, other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling, is PROHIBITED from the start of the application until 5 days after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Early entry under the WPS is limited to tarp inspection and repair. Non-handler entry is prohibited while tarps are being removed.

See the Buffer Zone section of the label for additional Entry Restrictions.

Notification at Entrances to Treated Areas
Notify all workers of the fumigation verbally and by posting warning signs at all likely entrances to the treated area for no less than 5 days after application. The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) MIDAS 50:50
(6) Name, address, and telephone number of the Certified Applicator in charge of the application.

Post these fumigant warning signs for treated areas instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal.

PPE for Reentry during the Entry-Restricted Period
The PPE required for reentry during the entry-restricted period are:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).

GENERAL INFORMATION AND INSTRUCTIONS

This fumigant is a highly hazardous material. All uses of this fumigant are covered under the Worker Protection Standard, and must be conducted in accordance with all of the requirements of the Worker Protection Standard (40 CFR Part 170). It is a restricted use pesticide that must only be used by or under the direct supervision of individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

GENERAL USE PRECAUTIONS

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs.
- Comply with all local ordinances and regulations.
- Do not apply within ¼ mile of any occupied sensitive site such as schools, day care facilities, nursing homes, hospitals, prisons, and playgrounds.
- Applications are limited to 40 contiguous acres or less per day on a single site. .
- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. In addition, consult the local weather forecast in the surrounding region for reports of expected inversion layers the day of application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two trained employees must be present during handling and application of soil fumigants.
- Certified Applicators are responsible for providing information to all workers involved with the fumigation about precautions and procedures in the safe handling, worker protection and application of MIDAS 50:50 for soil fumigation.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers positioned "upwind" from the container and/or where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking.
- For broadcast/flat fume applications, keep all pets, livestock and other domestic animals out of the treated areas until tarps have been removed.
- For raised bed applications, keep all pets, livestock and other domestic animals out of the treated areas for 5 days and until the air concentration for chloropicrin is less than 0.1 ppm at the edge of the treated area. Most raised bed applications will not result in tarp removal.
- Tarp removal requires a minimum of two trained employees to be present during the operation. Non-handler personnel are prohibited from being present during tarp removal.
- See AGRICULTURAL USE REQUIREMENTS box for details regarding posting and placement of warning signs.
- Do not allow entry by unprotected persons into the fumigated area until the re-entry signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 5 days following application. Signs must remain legible during entire posting period. Also, do not cut tarps for planting until these conditions have been met.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site as determined by 3 consecutive measurements taken at the down wind edge of the treated site at least 15 minutes apart.

SPILL AND LEAK PROCEDURES

- Cease all operations if any leak develops in the fumigation system.
- Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind to repair leak(s), if possible.
- For entry into the area to correct the problem, trained personnel must wear loose fitting or well ventilated long-sleeved shirt and long pants, shoes plus socks and either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) or (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipped handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm as specified in section above.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center at 1-800-424-8802.

PROCEDURES PRIOR TO, DURING AND AFTER ALL APPLICATIONS

Control of Soil Borne Pests: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases.

Midas 50:50 will control the following pests when present in soil at the time of treatment:

Weed Seeds, including broadleaf weeds such as nutsedge, pigweed, broomrape and lambsquarters, and grasses such as bermudagrass, and annual bluegrass. Effectiveness against hard seed weeds, such as mallow, dodder, morning glory, and certain leguminous weeds may be variable.

Plant-parasitic Nematodes, such as root-knot, root lesion (meadow), cyst, citrus, burrowing, false root-knot, lance, spiral, ring, sting, stubby root, dagger, awl, sheath and stung (stylet) nematodes.

Soil-borne Insects, such as wireworms, cutworms, grubs, rootworms, ants and garden symphylans.

Soil-borne Diseases, such as *Verticillium*, *Pythium*, *Rhizoctonia*, *Phytophthora*, and *Fusarium*.

MIDAS 50:50 is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

Soil Preparation: The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment. Little or no plant refuse should be present on soil surface. Prior to application, the soil must be sufficiently moistened to allow seeds to swell (imbibe) in preparation for germination.

Prior to All Applications:

- Ensure that application equipment does not contain components made of natural rubber, aluminum, magnesium or their alloys.
- Soil in the treatment area should be reasonably free of trash and in good tilth prior to treatment.
- Do not apply to wet or cold soils (<55°F at a depth of 8 inches).

During All Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Applications:

- To minimize the potential for crop injury, allow the fumigant to dissipate before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin is detectable. See fumigation tables for planting requirements specific to the different application methods.
- Fumigation of highly acidic soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil causing phytotoxicity. Analyze soil following fumigation and fertilize as indicated. Avoid those fertilizers using ammonium salts.

MIDAS 50:50 PRE-PLANT FIELD FUMIGATION METHODS

Fumigation with MIDAS 50:50 shall only be performed in accordance with the following three application techniques: 1) Raised Bed Application, 2) Broadcast/Flat Fume Application, or 3) Deep Injection Auger Probe Application (stone fruit, nut trees, vines, and field-grown ornamentals only). Application methods and rates of application for each of these methods are discussed in detail below

RAISED BED APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
    - Closing shoes and compaction roller: The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Bed shaper: The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Combination bed former and bed shaper: The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- Planting shall not occur for at least 10 days after application (refer to RAISED BED SOIL FUMIGATION TABLE below).

Application Rates for Raised Bed Fumigation: Rates in the table below are given in pounds of MIDAS 50:50 per broadcast acre.The amount of product applied will be proportionate to the row spacing and width of the raised bed. To calculate the amount of product to be applied, multiply the application rate in lbs MIDAS 50:50/broadcast acre by the appropriate modifier from the Field Rate Modifier Table provided below.

RAISED BED SOIL FUMIGATION TABLE

Crop	MIDAS 50:50 Per Broadcast Acre[1]	Time Between Application and Planting
Field-Grown Ornamentals Peppers Strawberries Tomatoes	**Standard Film** 200 - 350 lbs/Broadcast Acre (12.6 – 22 gal/Broadcast Acre)	10 – 14 days[2, 3]
	Highly Retentive Film 150-200 lbs/Broadcast Acre (9.4 – 12.6 gal/Broadcast Acre)	14 - 21 days when using highly retentive film[4, 5]

NOTE:

[1] For fields infested with Nutsedge and Malva, apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50.

[2] Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain or persistence of chloropicrin odor in the soil.

[3] If standard tarpaulins are NOT removed, planting can occur a minimum of 10 days after application, which includes the minimum 24 hours of aeration once the tarps have been cut. If tarpaulins are not cut or aerated prior to planting, the odor of chloropicrin must not be detectable. If odor of chloropicrin is detectable, wait a minimum of 14 days before planting to avoid possible plant injury.

[4] Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate reduction recommendations and approved films.

[5] If highly retentive films are not removed, planting can occur a minimum of 14 days after application, which includes the minimum 24 hours of aeration once the tarps have been cut. If the tarpaulins are not cut or aerated, prior to planting, the odor of chloropicrin must not be detectable. If odor of chloropicrin is detectable, wait a minimum of 21 days before planting to avoid possible plant injury.

Field Rate Modifier Table for Raised Bed Applications

Row Spacing (inches)	**Bed Width** (inches)	**Field Rate Modifier**
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

BROADCAST / FLAT FUME APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface.
    - Closing shoes and compaction roller: The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- Planting shall not occur for at least 10 days after application (refer to BROADCAST / FLAT FUME APPLICATION TABLE).
- This product may be applied by broadcast/flat fume application with standard polyethylene films or highly retentive films, as they become available. Contact your Arysta LifeScience North America representative for information on film selection and rate reduction recommendations.

Application Rates for Broadcast/Flat Fumigation:

BROADCAST/FLAT FUME APPLICATION TABLE		
Crop	**MIDAS 50:50 Per Acre[1]**	**Time Between Application and Planting**
Field-Grown Ornamentals Peppers Strawberries Tomatoes Turf	200 – 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days
Stone Fruits (Apricot, Sweet Cherry, Tart Cherry, Nectarine, Peach, Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot, Fresh Prune) Tree Nuts (Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Black Walnut, English Walnut) Vines (Table, Raisin and Wine Grapes)	240 – 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days[2]
Nurseries (including strawberries, stone fruits, tree nuts and conifer trees)	350 lbs/Acre (22 gal/Acre)	10 – 14 days[2]

NOTE:

[1] For fields infested with Nutsedge and Malva apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50..

[2] If tarpaulins are removed, planting can occur 10 days after application, which includes the minimum 5-day treatment period before tarps are cut plus the minimum of 24 hours of aeration after tarps are cut and before they are removed. Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain or persistence of chloropicrin odor in the soil.

Tarpaulin Cutting and Removal for Broadcast / Flat Fume Applications: Following the completion of the application of MIDAS 50:50, the tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.

If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed (a task which cannot occur until a minimum of 5 days after application, as stated above).

PREPLANT DEEP INJECTION AUGER-PROBE APPLICATION

For Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs, use 1 – 1.5 lbs of MIDAS 50:50 per injection site, typically to a depth of between 18 to 36 inches below the soil surface, though deeper injections may be made as appropriate. Use 1 injection site per 100 square feet (i.e., one injection site every 10 feet in a standard grid pattern). Planting or replanting of Stone Fruit, Tree Nuts, Vines, and Field Grown Ornamental Trees and Shrubs may begin 14 days after treatment. DO NOT PLANT if the odor of chloropicrin is detectable.

Do not treat more than 230 trees/shrubs/vines per acre per day.

Buffer Zones

- 25 feet if the application rate is less than 100 lbs MIDAS 50:50 per acre.
- 50 feet if application rate is 100 to 249 lbs MIDAS 50:50 per acre, and
- 100 feet if the application rate is 250 to 350 lbs MIDAS 50:50 per acre.

FOOD CROP ROTATION RESTRICTIONS

Food crops other than strawberry, tomatoes and peppers require a 4 month plant back rotation restriction from the date of fumigant application. Crop rotation to non-food crops or non-bearing fruit or nut trees is not restricted.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders shall not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers shall never be refilled by the consumer or used for any other product or purpose.

FOR 24-HOUR CHEMICAL EMERGENCY (spill, leak, fire or accident) ASSISTANCE:
Call CHEMTREC at 1-800-424-9300

Warranty and Disclaimer Statement

1. The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America Corporation ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.
2. Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.
3. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO**

SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.

4. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARYSTA, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARYSTA'S ELECTION, THE REPLACEMENT OF THE PRODUCT.**

Arysta LifeScience

September 4, 2007

Ms. Mary Waller
Product Management Team (21)
Fungicide-Herbicide Branch (H7505C)
Registration Division
Office of Pesticide Programs
Document Processing Desk (APPL)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Subject: MIDAS®50:50
EPA File Symbol 66330-LT
Application for Pesticide Registration

Dear Ms. Waller,

Arysta LifeScience North America herewith submits the enclosed application for pesticide registration of MIDAS®%50:50 (49.9% Iodomethane: 49.75% Chloropicrin) as an end use product in accordance with Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act as amended. The enclosed registration application consists of one administrative volume which contains the following information:

- Transmittal Letter
- Application Form for Pesticide Registration (8570-1)
- A Confidential Statement of Formula (CSF) (8570-4)
- Five paper copies of the proposed product label
- Certification With Respect to Data Citation (8570-34)
- A data matrix listing the studies being cited (8570-35).
- Formulator's Exemption Statement (8570-27)

The enclosed revised CSF is consistent with one submitted by Laurent Mezin on September 1, 2006 with the exception of slight rounding errors which have been corrected in Box 13 and 14. We are looking forward to working with you to complete this registration action. Should you have any questions concerning this matter, please feel free to contact me at the coordinates listed below:

Sincerely,

Abraham J. Tobia

Abraham J. Tobia, PhD, MS
Regulatory Manager/Toxicology Manager
T: (919) 678-4886
F: (919) 678-2194
M: (919) 793-8889
mailto:abe.tobia@arystalifescience.com

cc : B. Rhodes
R. Tinsworth
M. Allan
B. Mileson (cover only)
A. Lawyer

Print Form

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 2-28-

EPA

United States
Environmental Protection Agency
Washington, DC 20460

[X] **Registration**
[ ] **Amendment**
[ ] **Other**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
Arysta LifeScience North America / 66330-LT	Mary Waller	[ ] None [X] Restricted
4. Company/Product (Name) Arysta LifeScience North America / Midas 50:50	**PM#** 21	

5. Name and Address of Applicant *(Include ZIP Code)*

Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150, Cary, NC 27513

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

[ ] Amendment - Explain below.
[ ] Resubmission in response to Agency letter dated _____
[ ] Notification - Explain below.
[ ] Final printed labels in repsonse to Agency letter dated _____
[ ] "Me Too" Application.
[X] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Modification of Label per discussions with EPA

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [X] No	[ ] Yes [X] No	[ ] Yes [X] No Text	[X] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[X] Label [ ] Container	25, 110, 400 gals	[X] On Label [ ] On Labeling accompaning product

6. Manner in Which Label is Affixed to Product [X] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Abraham J. Tobia, Ph.D.	Manager Regulatory/ Toxicology Manager	

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
Abraham J. Tobia	Manager Regulatory/ Toxicology Manager
4. Typed Name Abraham J. Tobia, Ph.D.	**5. Date** August 29, 2007

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (21383, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460.

INSTRUCTIONS: This form is 10 be used Jar 811 applications far new registration, end use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-273;
4. Five copies of draft labeling;
5. Three copies of any date submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling -Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 14 inch file. Mockup labels significantly smaller than 8.6x 11 inches should be mounted on 8.5 X 11 inch paper for submission.
Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

Specific Instructions: Please read the instructions listed below before completing this application. First determine the type of registration section, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc. Sections I, II, and IV must be completed by the applicant. Block A -Check the appropriate action for which you are submitting this form.

Section I - This section must be completed, as applicable, far ell registration actions.

1. Company Product Number -Insert your Company Number, if one has been assigned by EPA. This number may have been assigned for you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. EPA Product Manager -If known, fill in the name end PM number of the EQA Product Manager.
3. Proposed Classification -Specify the proposed classification of this product.
4. Product Name -Enter the complete product name of this pesticide as it will appear on the label, The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. Name and Address of Applicant -The name of the firm or parson and address shown in your application is the person or firm to whom the registration will be issued. If you ere acting in behalf of another party, you must submit authorization from that party to act for them in registration matters, An applicant not residing in the United States must hove an authorized agent residing in the United States to act for them in all registration matters. The name rand complete mailing address of such an agent must accompany this application.
6. Expedited Review -FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to bs eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

Section II -This section must be completed for all applications submitted to amend the registration only of a currently registered product Amendment), for a resubmission for notifications to the Agency, for the submission of final printed labeling, for in response to an Agency letter, reregistration aid for any other action that pertains to a registered product. This section is not to be used for a new application for registration. .

1. subject of submission -Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the, purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

Section III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. Type of Packaging -Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. Types of Retail Container . Indicate type of container in which product will be marketed.
3. Location of Net Contents -Indicate the location of the net contents information for your product.
4. Size(s) of Retail Container -Specify the net contents of a11 retail containers for your product.
5. Location of Use Directions -Indicate the location of the use directions for your product.
6. Manner in which labels is affixed to product -Indicated the method product label is attached to retail container.

Section IV - Contact Point) -This Section must he completed for all applications for Registration actions, i.e., new products registration resubmission, "me-too," reregistration, etc.

1-5. Self-explanatory.
6. EPA Use Only

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS® 50:50

For Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	49.90%
Chloropicrin	49.75%
OTHER INGREDIENTS:	0.35%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.93 pounds Iodomethane and 7.91 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille.
(If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.

HOT LINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE:
Call PROSAR at 1-866-303-6952

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.

EPA Reg. No. 66330-
EPA Est. No.

For Product Information Call: 1-866-761-9397

Net Contents:

Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

CHLOROPICRIN WARNING: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading devices, such as Kitagawa tubes, certified for chloropicrin. Persons involved in the application of MIDAS® 50:50 or in reentry into treated fields must wear an air-purifying respirator when required by the restrictions given in the AGRICULTURAL USE REQUIREMENTS section below. In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- When handling the product (e.g. the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. DO NOT wear goggles.
- Follow PPE manufacturer's instructions for cleaning / maintaining protective eyewear and respirators.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.

- External sight gauges, if applicable, shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all cylinder connections and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.

USER SAFETY REQUIREMENTS

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only certified applicators and workers under their direct supervision trained in the proper handling, worker protection and application of MIDAS 50:50 soil fumigant may be present in the treatment area during application. Application tasks that require certification or to be performed under the direct supervision of a certified applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser and shoveler. All such personnel must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

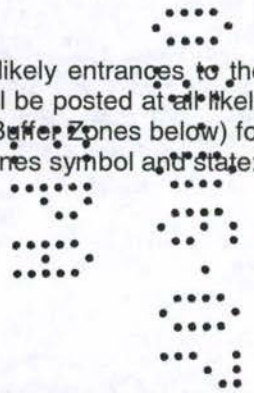
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person, other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling, is PROHIBITED from the start of the application until 48 hours after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Non-handler entry is prohibited while tarps are being removed.

Entry Restrictions into the Fumigation Buffer Zones are defined in the Section "Prohibition of Entry into Fumigation Buffer Zones" below.

Notification at Entrances to Treated Areas and Fumigation Buffer Zones
Notify all workers of the fumigation verbally and by posting warning signs at all likely entrances to the treated area for no less than 48 hours. In addition, warning signs, if required, shall be posted at all likely entrances to the Fumigation Buffer Zone (see Prohibition of Entry into Fumigation Buffer Zones below) for the first ___ hours following application. The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) MIDAS 50:50
(6) Name, address, and telephone number of the applicator.



Post these fumigant warning signs for treated areas instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal.

Prohibition of Entry into Fumigation Buffer Zones

- The area adjacent to the treated area is referred to as the Fumigation Buffer Zone.
- The Fumigation Buffer Zone shall extend from the edge of the treated area in all directions, to a distance calculated per the directions below. The minimum Fumigation Buffer Zone distance shall be __ feet from the edge of the treated area.
- Any activity which results in a person being present within the Fumigation Buffer Zone during the __ hour period following application is prohibited unless the task is permitted under the WPS. Correctly trained handlers wearing appropriate PPE and performing a task that is permitted by this labeling may enter inside the Fumigation Buffer Zone.
- Examples of activities that are prohibited are work or recreation within a Fumigation Buffer Zone, or occupation of structures that are within a Buffer Zone during the period that the Fumigation Buffer Zone is in effect.
- Examples of activities that are not prohibited are driving past the treated field in an area that would otherwise be within the boundary of the Fumigation Buffer Zone.

Determining Distance for Fumigation Buffer Zone

- The size of the Fumigation Buffer Zone will be dependant on the following two factors:
  - The number of field acres that are being treated with MIDAS 50:50..
  - The pounds of MIDAS 50:50 that are being applied per field acre (referred to as the "field equivalent rate").

- The Fumigation Buffer Zone distance shall be determined as follows:
  - For raised bed applications, the "treated acreage" differs from the "field acreage" because only the rows are treated. As raised bed width and row spacing vary, the amount of product applied per field acre will also vary. Since Fumigation Buffer Zones must be determined from the application rate per *field acre*, it is necessary for raised bed applications to translate the application rate per *treated acre* into the application rate per *field acre*. To calculate the *field acreage* rate equivalent from the actual raised bed application rate, multiply the application rate (which is in lbs MIDAS 50:50/treated acre - see Raised Bed Soil Fumigant Table below) by the appropriate Raised Bed Field Rate Modifier from the following table.

Field Rate Modifier Table for Raised Bed Applications

Row Spacing (inches)	**Bed Width** (inches)	**Field Rate Modifier**
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

For example, the field acre-equivalent rate for application using 72 inch row spacing and 36 inch bed width for an application of 300 lbs MIDAS 50:50 per treated acre is 300 lbs product /Treated Acre x 0.50 = 150 lbs product /Field Acre.

  - Determine the size of the Fumigation Buffer Zone using the following Fumigation Buffer Zone Table. The table inputs are the number of field acres treated and the application rate per field acre (using the application rate per field acre-equivalent for raised bed applications, as detailed above).

[INSERT FUMIGATION BUFFER ZONE TABLE HERE]
[INSERT PREVAILING WIND BUFFER ZONE GUIDANCE]

PPE for Reentry during the Entry-Restricted Period
Reentry within the treated area within the 48 hour restricted period is limited to inspection and repair of tarping material allowed by this labeling and or tasks permitted under the WPS. The PPE required for these tasks are:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).

GENERAL INFORMATION AND INSTRUCTIONS

This fumigant is a highly hazardous material. It is a restricted use pesticide that must only be used by or under the direct supervision of individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

CONTROL OF SOIL BORNE PESTS: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases.

Midas 50:50 will control the following pests when present in soil at the time of treatment:

Weed Seeds, including broadleaf weeds such as nutsedge, pigweed, broomrape and lambsquarters, and grasses such as bermudagrass, and annual bluegrass. Effectiveness against hard seed weeds, such as mallow, dodder, morningglory, and certain leguminous weeds may be variable.

Plant-parasitic Nematodes, such as root-knot, root lesion (meadow), cyst, citrus, burrowing, false root-knot, lance, spiral, ring, sting, stubby root, dagger, awl, sheath and stung (stylet) nematodes.

Soil-borne Insects, such as wireworms, cutworms, grubs, rootworms, ants and garden symphylans.

Soil-borne Diseases, such as *Verticillium, Pythium, Rhizoctonia, Phytophthora,* and *Fusarium.*

MIDAS 50:50 is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

PROCEDURES AND SAFETY MEASURES PRIOR TO, DURING AND AFTER ALL APPLICATIONS

Soil Preparation: The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment. Little or no plant refuse should be present on soil surface. Prior to application, the soil must be sufficiently moistened to allow seeds to swell (imbibe) in preparation for germination.

Prior to All Applications:

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs:
    - The applicator (or supervisor of the application) must placard all likely entrances to the fumigated area with signs per Notification at Entrances to Treated Areas (see Agricultural Use Requirements).
- Comply with all local ordinances and regulations.
- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. In addition, consult the local weather forecast in the surrounding region for reports of expected inversion layers the day of application and within the 24 hour period following applications of MIDAS 50:50.

- Never fumigate alone. A minimum of two trained people must be present during handling and application of soil fumigants.
- Certified applicators are responsible for providing information to all workers under their supervision about precautions and procedures in the safe handling, worker protection and application of MIDAS 50:50 for soil fumigation.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers positioned "upwind" from the container and/or where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."
- Soil in the treatment area should be reasonably free of trash and in good tilth prior to treatment.
- Do not apply to wet or cold soils (<55°F at a depth of 8 inches).

During All Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Applications:

- Keep all pets, livestock and other domestic animals out of the treated areas until after the end of the fumigant period (typically 48 hours) and/or air concentration of chloropicrin is less than 0.1 ppm at the edge of the treated area.
- After broadcast/flat fumigation treatment, if plastic tarps are removed a minimum of two trained people are required to be present during the operation.
- Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 48 hours following application. Signs must remain legible during entire posting period. See AGRICULTURAL USE REQUIREMENTS box for details regarding posting and placement of warning signs.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site.
- To minimize the potential for crop injury, allow the fumigant to dissipate before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin is detectable. See fumigation tables for planting requirements specific to the different application methods.
- Fumigation of highly acidic soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil causing phytotoxicity. Analyze soil following fumigation and fertilize as indicated. Avoid those fertilizers using ammonium salts.

Spill and Leak Procedures:

- Cease all operations if any leak develops in the fumigation system.

- Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind to repair leak(s), if possible.
- For entry into the area to correct the problem, trained personnel must wear loose fitting or well ventilated long-sleeved shirt and long pants, shoes plus socks and either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) or (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipped handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center at 1-800-424-8802.

MIDAS 50:50 PRE-PLANT FIELD FUMIGATION METHODS

Fumigation with MIDAS 50:50 shall be performed in accordance with the following three application techniques: 1) Raised Bed Application, 2) Broadcast/Flat Fume Application, or 3) Deep Injection Auger Probe Application (stone fruit, nut trees and vines only). Application methods and rates of application for each of these methods are discussed in detail below

RAISED BED APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
    - Closing shoes and compaction roller: The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Bed shaper: The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
    - Combination bed former and bed shaper: The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- Planting shall not occur for at least 10 days after application (refer to RAISED BED SOIL FUMIGATION TABLE below).

Application Rates For Raised Bed Fumigation: Raised bed applications are made at a maximum rate of 350 lbs product per treated acre. The amount of product applied will be proportionate to the row spacing and width of the raised bed (refer to the RAISED BED FIELD RATE MODIFIER TABLE).

RAISED BED SOIL FUMIGATION TABLE		
Crop	**MIDAS 50:50 Per Treated Acre[1]**	**Time Between Application and Planting**

Field-Grown Ornamentals Peppers Strawberries Tomatoes	**Standard Film** 200 - 350 lbs/Treated Acre (12.6 – 22 gal/Treated Acre)	10 – 14 days[2, 3]
	Highly Retentive Film 150-200 lbs/Treated Acre (9.4 – 12.6 gal/Treated Acre)	14 - 21 days when using highly retentive film[4, 5]

NOTE:

[1] For fields infested with Nutsedge and Malva, apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50.

[2] Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain or persistence of chloropicrin odor in the soil.

[3] If standard tarpaulins are NOT removed, planting can occur a minimum of 10 days after application, which includes the minimum 24 hours of aeration once the tarps have been cut. If tarpaulins are not cut or aerated prior to planting, the odor of chloropicrin must not be detectable. If odor of chloropicrin is detectable, wait a minimum of 14 days before planting to avoid possible plant injury.

[4] Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for film selection and rate reduction recommendations.

[5] If highly retentive films are not removed, planting can occur a minimum of 14 days after application, which includes the minimum 24 hours of aeration once the tarps have been cut. If the tarpaulins are not cut or aerated, prior to planting, the odor of chloropicrin must not be detectable. If odor of chloropicrin is detectable, wait a minimum of 21 days before planting to avoid possible plant injury.

BROADCAST / FLAT FUME APPLICATION

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface.
    - o Closing shoes and compaction roller: The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- Planting shall not occur for at least 10 days after application (refer to BROADCAST / FLAT FUME APPLICATION TABLE).
- This product may be applied by broadcast/flat fume application with standard polyethylene films or highly retentive films, should they become available. Contact your Arysta LifeScience North America representative for information on film selection and rates reduction recommendations.

Application Rates For Broadcast/Flat Fumigation:

BROADCAST/FLAT FUME APPLICATION TABLE		
Crop	**MIDAS 50:50 Per Acre[1]**	**Time Between Application and Planting**
Field-Grown Ornamentals Peppers Strawberries Tomatoes Turf	200 – 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days
Stone Fruits (Apricot, Sweet Cherry, Tart Cherry, Nectarine, Peach, Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot, Fresh Prune) Tree Nuts (Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Black Walnut, English Walnut) Vines (Table, Raisin and Wine Grapes)	240 - 350 lbs/Acre (12.6 – 22 gal/Acre)	10 – 14 days[2]
Nurseries (including strawberries, stone fruits, tree nuts and conifer trees)	350 lbs/Acre (22 gal/Acre)	10 – 14 days[2]

NOTE:

[1] For fields infested with Nutsedge and Malva apply a minimum of 300 lbs/acre (18.9 gal/acre) of MIDAS 50:50..

[2] If tarpaulins are removed, planting can occur 10 days after application, which includes the minimum 5-day treatment period before tarps are cut plus the minimum of 24 hours of aeration after tarps are cut and before they are removed. Use the longer planting restriction period under conditions of high soil moisture, heavy soils, or rain or persistence of chloropicrin odor in the soil.

Tarpaulin Cutting and Removal For Broadcast / Flat Fume Applications: Following the completion of the application of MIDAS 50:50, the tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.

If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed (a task which cannot occur until a minimum of 5 days after application, as stated above).

PREPLANT DEEP INJECTION AUGER-PROBE APPLICATION

For Stone Fruits and Tree Nuts, and Vines use 1 – 1.5 lbs of MIDAS 50:50 per injection site, typically to a depth of between 18 to 36 inches below the soil surface, though deeper injections may be made as appropriate. Use 1 injection site per 100 square feet (i.e., one injection site every 10 feet in a standard grid pattern). Planting or replanting of Stone Fruits and Tree Nuts and Vines may begin 14 days after treatment. DO NOT PLANT if the odor of chloropicrin is detectable.

FOOD CROP ROTATION RESTRICTIONS

Food crops other than strawberry, tomatoes and peppers require a 4 month plant back rotation restriction from the date of fumigant application. Crop rotation to non-food crops or non-bearing fruit or nut trees is not restricted.

STORAGE, HANDLING AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders shall not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

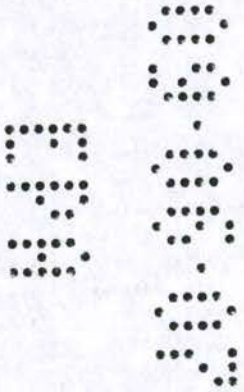
Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers shall never be refilled by the consumer or used for any other product or purpose.

FOR 24-HOUR CHEMICAL EMERGENCY (spill, leak, fire or accident) ASSISTANCE:
Call CHEMTREC at 1-800-424-9300

Warranty and Disclaimer Statement

1. The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America Corporation ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer.
2. Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.
3. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.**
4. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARYSTA, MANUFACTURER, AND SELLER,**

SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARYSTA'S ELECTION, THE REPLACEMENT OF THE PRODUCT.



Form Approved OMB Nos. 2070-0060; 2070-0057; 2070-0107; 2070-0122; 2070-0164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

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Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number	EPA Registration Number/File Symbol
Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150, Cary, NC 27513	66330-LT
Active Ingredient(s) and/or representative test compound(s) Iodomethane	Date 08/24/2007
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Fumigant	Product Name Midas 50:50

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☑ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	☐ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☑ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses .

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
Abraham A. Tobia	08/24/2007	Abraham Tobia - Regulatory & Toxicology Manager

EPA Form 8570-34 (12-2003) Electronic and Paper versions available. Submit only Paper version.

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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DATA MATRIX

Date August 28, 2008	EPA Reg No./File Symbol 66330-LT	Page 1 of 3
Applicant's/Registrant's Name & Addres: Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150, Cary, NC 27513	Product: Midas 50:50	

Ingredient: Iodomethane

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.0000	Product Chemistry	46448901	Arysta LifeScience North America	OWN	
830.1550	Product Identity and Composition	46448901	Arysta LifeScience North America	OWN	
830.1600	Description of Materials Used to Produce Product	46448901	Arysta LifeScience North America	OWN	
830.1650	Description of Formulation Process	46448901	Arysta LifeScience North America	OWN	
830.1670	Discussion of Formation of Impurities	46448901	Arysta LifeScience North America	OWN	
830.1700	Preliminary Analysis	46448901	Arysta LifeScience North America	OWN	
830.1750	Certified Limits	46448901	Arysta LifeScience North America	OWN	
830.1800	Enforcement of Analytical Method	46448901	Arysta LifeScience North America	OWN	
830.1900	Submittal of Standards	46448901	Arysta LifeScience North America	OWN	
830.6302	Color	46448901	Arysta LifeScience North America	OWN	
830.6303	Physical State	46448901	Arysta LifeScience North America	OWN	
830.6304	Odor	46448901	Arysta LifeScience North America	OWN	
830.6314	Oxidation/Reduction: Chemical Compatibility	46448901	Arysta LifeScience North America	OWN	
830.6315	Flammability	46448901	Arysta LifeScience North America	OWN	
830.6316	Explodability	46448901	Arysta LifeScience North America	OWN	

Signature: Abraham A. Tobia	Name and Title: Abraham Tobia Regulatory Manager/ Toxicology	Date: 8/28/2007

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DATA MATRIX

Date August 28, 2008	EPA Reg No./File Symbol 66330-LT	Page 2 of 3
Applicant's/Registrant's Name & Addres: Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150, Cary, NC 27513	Product: Midas 50:50	

Ingredient: Iodomethane

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6317	Storage Stability	46448901	Arysta LifeScience North America	OWN	
830.6319	Miscibility	46448901	Arysta LifeScience North America	OWN	
830.6320	Corrosion Characteristics	46448901	Arysta LifeScience North America	OWN	
830.6321	Dielectric Breakdown Voltage	46448901	Arysta LifeScience North America	OWN	
830.7000	pH	46448901	Arysta LifeScience North America	OWN	
830.7100	Viscosity	46448901	Arysta LifeScience North America	OWN	
830.7300	Density/Relative Density/Bulk Density	46448901	Arysta LifeScience North America	OWN	

Signature: Abraham A. Tobia

Name and Title: Abraham Tobia, Regulatory Manager/ Toxicology

Date: 8/28/2007

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Applicant's/Registrant's Name & Addres	Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150, Cary, NC 27513	Product: Midas 50:50	

Ingredient: Iodomethane

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.1100	Acute Oral Toxicity	46422702	Arysta LifeScience North America	OWN	
870.1200	Acute Dermal Toxicity	46422702	Arysta LifeScience North America	OWN	
870.1300	Acute Inhalation Toxicity	46422702	Arysta LifeScience North America	OWN	
870.2400	Acute Eye Irritation	46422702	Arysta LifeScience North America	OWN	
870.2500	Acute Dermal Irritation	46422702	Arysta LifeScience North America	OWN	
870.2600	Skin Sensitization	46422702	Arysta LifeScience North America	OWN	
810.0000	Efficacy of Fungicides and Nematicides	45593823	Arysta LifeScience North America	OWN	
810.0000	Efficacy of Pre-emergent Herbicide	45593823	Arysta LifeScience North America	OWN	
810.0000	Efficacy of Invertebrate Control - Soil Treatments	45593823	Arysta LifeScience North America	OWN	
810.0000	Phytotoxicity	45593823	Arysta LifeScience North America	OWN	

Signature	Abraham A. Tobia	Name and Title: Abraham Tobia Regulatory Manager/ Toxicology	Date: 8/28/2007

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Applicant's/Registrant's Name & Addres	Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150, Cary, NC 27513		Product: Midas 50:50		
Ingredient: Iodomethane					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
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			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
Signature	Abraham A. Tobia		Name and Title: Abraham Tobia Regulatory Manager/ Toxicology		Date: 8/28/2007

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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
Signature	Abraham A. Tobia		Name and Title: Abraham Tobia Regulatory Manager/ Toxicology		Date: 8/28/2007

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Date August 28, 2008			EPA Reg No./File Symbol 66330-LT		Page 3 of 3
Applicant's/Registrant's Name & Addres	Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150, Cary, NC 27513		Product: Midas 50:50		
Ingredient: Iodomethane					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]	[redacted]	[redacted]	Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
			Arysta LifeScience North America	OWN	
Signature	Abraham A. Tobia		Name and Title: Abraham Tobia Regulatory Manager/ Toxicology		Date: 8/28/2007

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United States Environmental Protection Agency
Washington, D.C. 20460

EPA

Formulator's Exemption Statement

(40 CFR 152.85)

Applicant's Name and Address	EPA File Symbol/Registration Number 66330-LT
	Product Name MIDAS®50:50
	Date of Confidential Statement of Formula (EPA Form 8570-4) 8/31/07

As an authorized representative of the applicant for registration of the product identified above, I here certify that:

(1) This product contains the following active ingredient(s): chloropicrin

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging of another product which contains that active ingredient, which is registered under FIFRA Section 3, is purchased by us from another producer, and is labeled for at least each use for which my product is proposed to be labeled.

(3) Indicate by checking (A) or (B) below which paragraph applies:

X☐ (A) An accurate Confidential Statement of Formula *(EPA Form 8570-4)* for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula *(CSF) (EPA Form 8570-4)* referenced above and on file with the EPA is complete, current, and accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

	Source	
Active Ingredient	Product Name	Registration Number
Chloropicrin	[redacted]	[redacted]
Chloropicrin		
Chloropicrin		

Product ingredient source information may be entitled to confidential treatment

Signature	Name and Title	Date
Abraham J. Tobia	Abraham J. Tobia – Regulatory Manger	August 31, 2007

EPA Form 8570-27 (Rev. 7-91) White - EPA copy Yellow - Applicant copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Dr. Abraham J. Tobia
Consulting Regulatory Manager
Registration and Regulatory Affairs
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

AUG 31 2007

Subject: Midas 50:50
EPA Experimental Use Permit No. 66330-EUP-37
Your Request of May 21, 2007 for Revision of the Effective Dates and Provisions of the Experimental Use Program
Effective Dates: August 31, 2007 – August 31, 2008
Quantity Authorized: 150,000 lbs. of Midas 50:50
Active Ingredient: 75,000 lbs. iodomethane
75,000 lbs. chloropicrin
Acres to be treated: 1,000 acres

Dear Dr. Tobia:

On the basis of the information furnished by the applicant, the Experimental Use Permit (EUP) granted under Section 5 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (86 Stat. 983), is hereby extended and revised for the named pesticide provided the following label revisions are made and the following conditions are met:

Label Revisions

1. The EPA Experimental Use Permit Number 66330-EUP-37 must appear on the revised label.

2. On page 1, move the restricted use box to the very top of the page.

3. On page 1, add the word "program" to the end of the sentence "Not for sale to any person other…".

4. On page 4, under User Safety Recommendations, delete "If clothing is drenched or heavily contaminated . . . do not reuse them." This information appears under the User Safety Requirements, and it important to be clear about what action is a requirement versus a recommendation.

5. On page 5, delete the following sentence "The requirements in this box only apply to uses of this product. . . (WPS)."

6. On page 8, revise the buffer zone from "50 ft." to "60 ft." in the first sentence under the table.

7. On pages 13 and 15, in all places where the sentence "Contact your Arysta LifeScience representative for rate recommendations." appears, revise the sentence to read "Contact your . . . for rate reduction recommendations.

8. On page 17, revise the word "should" to "shall" in the first sentence in the "Handling" section in the Storage and Disposal box.

9. On page 18, revise the word "should" to "shall" in the last sentence in the "Return of Containers" section.

Experimental Use Program Conditions:

1. All conditions of the experimental use program remain as previously approved except for the following revisions:
   a. The EUP is amended by adding the State of CA.
   b. Thirty acres is transferred to CA from the 600 acres previously allocated for FL.
   c. The label is amended to add drip irrigation and the application rate increase from 300 lbs to 350 lbs/product/acre for designated application methods.

2. The three field volatility studies required as a condition of the initial registration of this experimental use permit must be submitted to the Agency no later than November 30, 2007.

3. Prior to shipment and/or use of this material, you must consult with the State Pesticide Regulatory Officials of the States in which your experimental program will be conducted and obtain a state permit license if such is required. Issuance of this federal permit does not negate the need for permission from the individual states. Failure to do so may result in revocation or modification of this experimental use permit.

4. You must comply with section 172.8(b)(2) which states: "A final report shall be submitted within 180 days after the expiration of the permit, unless a request for extension of time is approved, and shall include: (i) All data gathered during the testing

program; field notes need not be submitted but must be maintained and submitted upon request; and (ii) A description of the disposition of any pesticide containers and any unused pesticide including amounts disposed of and the method and site of disposition.

Shipment and/or use under this permit are subject to the provisions of 40 CFR 172. Based upon the experimental program, this product may be shipped for use under this permit to cooperators in the following States: Florida, Georgia, Michigan, North Carolina, South Carolina, Tennessee, California, and Virginia.

A stamped copy of the approved label is enclosed for your records. This labeling, with the required changes must be used for all shipments under this EUP. Submit one copy of the revised labeling for our records.

Sincerely,

Cynthia Giles-Parker, Chief
Fungicide Branch
Registration Division (7505P)

Enclosure

FOR EXPERIMENTAL USE ONLY

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS™ 50:50

For Experimental Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	50.00%
Chloropicrin	50.00%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.95 pounds Iodomethane and 7.95 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille. (If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.

	• Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBERS For 24-hour chemical emergency (spill, leak, fire or accident) assistance: Call CHEMTREC at 1-800-424-9300. For 24-hour emergency medical assistance: Call 1-800-228-5635 Ext. 174 For the Poison Control Center: Call 1-800-222-1222	
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.	

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA EUP No.: 66330–EUP-37 Net Contents _____
EPA Est. No.: ___ - __

Arysta LifeScience North America
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

CHLOROPICRIN WARNING: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading devices, such as Kitagawa tubes, certified for chloropicrin. Persons involved in the Experimental Use application of MIDAS 50:50 or in reentry into buffer zones or treated fields must wear an air-purifying respirator when required by the restrictions given in the "AGRICULTURAL USE REQUIREMENTS" section (below). In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- When handling the product (e.g. the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or

couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.

USER SAFETY REQUIREMENTS

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning / maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing. If clothing is drenched or heavily contaminated with this product, discard clothing or absorbent materials (e.g. leather) - do not reuse them.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH APPROVED EXPERIMENTAL USE PROGRAM.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only certified applicators and workers under their direct supervision trained in the proper handling, worker protection and application of MIDAS soil fumigant may be present in the treatment area or buffer zone during application. Application tasks that require certification or to be performed under the direct supervision of a certified applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher. All such personnel must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions:
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person - other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling – is PROHIBITED from the start of the application until 48 hours after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Non-handler entry is prohibited while tarps are being removed.
Entry Restrictions into the EUP Buffer Zones are defined in the Section "Prohibition of Entry Into EUP Buffer Zones" below.

Notification at Entrances to Treated Areas and EUP Buffer Zones:
Notify all workers of the fumigation verbally and by posting warning signs at entrances to EUP Buffer Zones (EUP Buffer Zones are defined in the next section). The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) Name of this product, and
(6) Name, address, and telephone number of the applicator.

Post these fumigant warning signs instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal. These fumigant warning signs shall be posted for no less than 48 hours after treatment.

Prohibition of Entry Into EUP Buffer Zones:

- From the start of the application until 48 hours after the application of MIDAS 50:50 has ended, the supervisors of experimental work under this EUP shall prohibit persons and domestic animals from being present in areas adjacent to the treated field. These adjacent areas are referred to as the EUP Buffer Zones.

- An EUP Buffer zone shall extend from the edge of the treated area in all directions, to a distance calculated per the directions below. The minimum EUP Buffer Zone distance shall be 60 feet from the edge of the treated area.

- Any activity which results in a person being present within the EUP Buffer Zone during the 48 hour period following application is prohibited unless the task is permitted under the WPS. Correctly trained handlers wearing appropriate PPE and performing a task that is permitted by this labeling may enter inside the Buffer Zone. Examples of activities that are prohibited are work or recreation within a Buffer Zone, or occupation of structures that are within a Buffer Zone while

the Buffer Zone is in effect. Examples of activities that are not prohibited are driving past the treated field or occupying a structure that is not within the Buffer Zone.

For this Experimental Use of MIDAS 50:50, the following restrictions apply:

- The areas treated with MIDAS 50:50 shall not exceed 20 field acres (sometimes referred to as "real estate acres") for bedded fumigation applications. For ornamental or strawberry nursery crops broadcast or flat fumigation applications will be allowed on fields of up to two (2) acres. In California, broadcast or flat fumigation applications will be allowed for comparing application equipment and techniques on fields up to five (5) acres. For the purposes of this Experimental Use Permit, applications shall not be made to fields that are within a ½ mile of each other, unless the combined acreage does not exceed the above restriction, or the application timelag between the two applications is at least 24 hours.
- The EUP Buffer Zone shall depend on the field-equivalent rate (Lbs MIDAS 50:50/Acre) and field size, as follows:
  - The application rate for this EUP program shall be limited to a maximum of 350 lbs product per treated acre. In bedded applications, the treated acreage differs from the field acreage because only the rows are treated. As row width and spacing will vary, a "field-equivalent" rate range is possible. For broadcast applications, "field acre", "treated acre" and "real estate acre" are equivalent terms.
  - To calculate the field rate equivalent to the actual raised bed application rate, multiply the treated rate by the appropriate Field Rate Modifier from the table below:

Field Rate Modifier Table

Row Spacing (inches)	Bed Width (inches)	Field Rate Modifier
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

For example, the field-equivalent rate for application using 72 inch

row spacing and 36 inch bed width is 300 lbs product /Acre x 0.50 = 150 lbs product /Acre.

- To determine the size of the buffer zone required for an EUP application, use the field-equivalent rate calculated above and the field acreage of the application, in the table below.

EUP Buffer Zone Table (feet) – field-equivalent rate*

Field size	Up to 120 lbs product /A	> 120 to 180 lbs product /A
Up to 5 acres	60	115
>5 to 10 acres	60	250
>10 to 20 acres	150	445

*: For broadcast applications on fields destined for ornamental and strawberry nursery crops (fields that this EUP limits to no larger than 2 acres per site), the buffer zone distance shall be fixed at 50 feet for 200 lbs of product, 115 feet for 250 lbs of product, 180 feet for 300 lbs of product, and 250 feet for 350 lbs of product. In California, for the single broadcast application onto 2.5 acres at a rate of up to 200 lbs of product per acre, the buffer zone distance shall be fixed at 115 feet.

PPE For Reentry During the Entry-Restricted Period:
Reentry within the treated area within the 48 hour restricted period is limited to inspection and repair of tarping material allowed by this labeling. Reentry within the EUP Buffer Zone adjacent to the treated area within the 48 hour restricted period is limited to tasks permitted under the WPS. The PPE required for these tasks are listed in the "Personal Protective Equipment" section of this label's PRECAUTIONARY STATEMENTS.

Precautions for Usage Prior to, During and After All Soil Applications:

Prior to Fumigant Applications:

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs:
  - The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing the following:
    - Skull and crossbones symbol.
    - "DANGER/PELIGRO".
    - "Area under fumigation. DO NOT ENTER/NO ENTRE."
    - "Iodomethane and Chloropicrin Fumigants in Use."
    - The date and time of fumigation,
    - Name of this product, and
    - The name, address, and telephone number of the applicator.
- Comply with all local ordinances and regulations.

- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. Consult the local weather forecast in the surrounding region for reports of expected inversion layers during application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two trained people must be present during handling and application of soil fumigants.
- Certified applicators are responsible for providing all other workers information about precautions and procedures in the safe handling, worker protection and application of MIDAS for soil fumigation. Application tasks include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers positioned "upwind" from the container and where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."
- Soil preparation of the treatment area should be reasonably free of trash and in good tilth prior to soil treatment.
- Do not apply to wet or cold soils (<55°F at a depth of 8 inches).

During All Fumigant Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Fumigant Applications:

- Keep all pets, livestock and other domestic animals out of the treated areas until after the tarpaulin has been removed.
- Remove the plastic tarps with a minimum of two trained people present during the operation.
- Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 48 hours following application. Signs must remain legible during entire posting period.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site.
- Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Spill and Leak Procedures:

- Cease all operations if any leak develops in the fumigation system.
- Evacuate Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind, if possible.
- For entry into the area to correct the problem, trained personnel must wear all personal protective equipment required by this label, including either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TS-19C) OR (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipment handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center (800-424-8802).

General Information and Instructions

This fumigant is a highly hazardous material. It is a restricted use pesticide that must only be used by or under the direct supervision of individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

SOIL BORNE PESTS CONTROLLED: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases such as those caused by Phytophthora, Pythium, Fusarium, Verticillium and Rhizoctonia. Soil Fumigation using MIDAS 50:50 must be conducted according to directions and conditions of use described in this label. Application of this product will control only those pests present in the soil at time of soil treatment. It is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

SOIL PREPARATION: Prior to the application of soil fumigants, the ground must be sufficiently moist to allow seeds to swell (imbibe) in preparation for germination. The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment with soil fumigants.

FIELD FUMIGATION: Apply MIDAS 50:50 by shank fumigation or drip application. For shank fumigation use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed, utilizing a mechanical tarp layer, with a gas-tight plastic tarpaulin immediately following the chisel, as detailed below under "Iodomethane Pre-Plant Field Fumigation Methods". Tarps must remain on the soil for at least 5 days prior to cutting and removal.

PLANTING INTERVAL FOR ALL APPLICATIONS:

- Do not plant for at least 10 days after application of the fumigant. A longer period before planting is necessary when using highly retentive film (see tables below) and may be necessary if the soil is wet or cold.
- If tarpaulins are removed, planting can occur 10 days after application. This period includes the minimum 5 days of sealed fumigation prior to tarp cutting plus the minimum of 24 hours of aeration after the tarpaulins have been cut before they are removed.
- If tarpaulins are not to be removed before planting, then planting shall not occur before either:
    - At least 12 days after application, including at least 24 hours after holes have been cut in the tarpaulin to allow for aeration; or
    - At least 14 days after application. In this case, tarpaulins do not need to be cut or aerated prior to planting. However, if this option is chosen, the chloropicrin air concentration below the tarpaulin must be less than 0.1 parts per million before planting begins.

To minimize the potential for crop injury, allow the fumigant to dissipate completely before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin used in MIDAS 50:50 is detectable.

TARPAULIN CUTTING AND REMOVAL:

- Following the completion of the application of MIDAS 50:50 (including, when applicable, the formation of cross ditches), the tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.
    - If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed, a task which cannot occur until a minimum of 5 days after application, as stated above.

CROP ROTATION RESTRICTIONS

Crops other than strawberry, tomatoes, peppers require a 4 month plant back rotation restriction. Strawberries, fresh market tomatoes and peppers can be planted into treated soil as soon as crop safety can be assured and no sooner than 10 days after treatment. See Planting Interval for specific instructions.

Application by Bed Shank fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below. Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

BEDDED PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Application by Broadcast or Flat fumigation: Use dosage rates and planting intervals as indicated in the Broadcast Pre-Plant Soil Fumigation Table below. Broadcast or Flat fumigation shall be restricted to field-grown ornamentals and strawberry nurseries and field sizes shall not exceed two (2) acres. Refer to the "AGRICULTURAL USE REQUIREMENTS" box for additional restrictions.

BROADCAST PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Acre	Time Between Application and Planting*
Field-Grown Ornamentals	300 lbs / Acre (18.9 gal / Acre)	10 – 14 days 14 - 21 days when using highly retentive films**
Strawberry Nursery	350 lbs /Acre (22 gal/Acre)	10 – 14 days

* If odors of fumigant persist beyond the two-week period you may disc, plow or chisel the soil to help aeration in a flat fume (broadcast) fumigation operation. An air-purifying respirator shall be worn during these activities if the airborne concentration of chloropicrin is determined to be 0.1 ppm or greater when measured with a direct reading device such as a Kitagawa tube. Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

**Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

IODOMETHANE PRE-PLANT FIELD FUMIGATION METHODS:
During the Experimental Use Permit program, fumigations with MIDAS 50:50 shall be performed in accordance with the following application techniques.

Tarpaulin/Bedded

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
  - Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- The tarpaulin shall not be cut for at least 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Tarpaulin/Broadcast (ornamental and strawberry nursery crops only)

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface. The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Application by Raised Bed Drip Fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below and follow the instructions provided below under Drip Fumigation (Chemigation). Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

Bedded Pre-Plant Drip Fumigation Table

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

DRIP FUMIGATION (CHEMIGATION):

Apply this product only through buried drip tape or equivalent irrigation system. Do not use this product through any other type of irrigation system. As required for all applications of this product, treated areas must be covered with a plastic tarpaulin for a minimum of 5 days following application (see Precautions for Usage Prior to, During, and After All Soil Application section).

General Instructions for Drip Fumigation:

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- Only a person knowledgeable of the chemigation system and responsible for its operation, or persons under their direct supervision shall operate the system and make the necessary adjustments, should the need arise.
- Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- "Public water system" means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regulatory serves an average of at least 25 individuals daily at least 60 days out of the year.

- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed, automatic valve located on the intake side of the injection pump or inert gas pressurized cylinder and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) or an inert gas pressurized cylinder effectively designed and constructed of materials that are compatible with a system interlock.

Application by Drip Fumigation:

- Use dosage rates and planting interval times as indicated in the Pre-Plant Fumigation Table (above). Drip applications may be made at the broadcast rates but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.
- MIDAS 50:50 with emulsifying agent may be applied through buried drip tape. Use of a tarp seal is required for all applications of this product.
- The dilution rate for drip-line fumigation is 1,400 - 2000 ppm. One gallon of MIDAS 50:50 with emulsifying agent in 2650 gallons of water is equivalent to 1,000 ppm. MIDAS 50:50 with emulsifying agent must be metered into the water.
- Soil must be in good tilth and condition, free of clods and un-decomposed soil material.
- Use drip irrigation components made of brass, stainless steel, copper, nickel, polypropylene, polyethylene, Teflon, viton, rigid PVC, and EPDM. Rigid PVC must not be exposed to undiluted MIDAS 50:50 with emulsifying agent or more than 2000 ppm MIDAS 50:50 with emulsifying agent in the diluted form. Do not use aluminum, vinyl, plastic (other than polypropylene or polyethylene), zinc or alloys.
- In very sandy soils, apply MIDAS 50:50 with emulsifying agent when soil moisture conditions throughout the treatment zone are near field capacity. When necessary, apply a pre-treatment amount of water to wet the bed

and enhance even movement of the material through the soil profile at time of treatment.

- MIDAS 50:50 with emulsifying agent must be monitored as it enters the irrigation system and must pass through a static mixer, coarse filter, or fine strainer or equivalent devices to insure proper mixing before it is distributed through the irrigation system. Do not allow treatment solution to accumulate on the soil surface. Do not allow treatment solution to pond, puddle or run-off. If run-off occurs, discontinue the application immediately and cover the contaminated soil area with clean soil to absorb the material.
- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent back flow contamination of the water source.
- The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the chemical supply or injection pump.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Pump types must be suitable for the injection of corrosive materials and capable of being fitted with a system interlock. Injection systems must use a metering pump, such as a positive displacement or diaphragm pump, venturi system or a pressure safe cylinder containing MIDAS 50:50 with emulsifying agent equipped with a metering valve and flow meter.
- Following application, continue to apply irrigation water to rinse the irrigation system of any MIDAS 50:50 with emulsifying agent. Make sure any rigid dead end or low spots are drained or flushed completely. DO NOT ALLOW MIDAS 50:50 WITH EMULSIFYING AGENT TO REMAIN IN THE IRRIGATION SYSTEM. Leave the soil undisturbed for at least 10 days after fumigation, and then proceed with normal agricultural practices for crop management activities.

STORAGE, HANDLING AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be

firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers should never be refilled by the consumer or used for any other product or purpose.

CONDITIONS OF SALE

1. Arysta LifeScience North America Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use.
2. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arysta LifeScience North America. **ARYSTA LIFESCIENCE NORTH AMERICA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. TO THE EXTENT ALLOWED BY LAW, SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. ARYSTA LIFESCIENCE NORTH AMERICA DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**
3. Critical and unforeseeable factors beyond Arysta LifeScience North America's control (including but not limited to weather conditions, crop conditions, presence of other materials, use or application of the product in a manner inconsistent with its labeling, or other influencing factors in the

use of this product) prevent Arysta LifeScience North America from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which the product is applied, and lack of complete control Except as stated in 1 above, to the extent allowed by law, Buyer and User acknowledge and assume all risks and liabilities resulting from handling, storage, and use of this product.

MIDAS is a trademark of Arysta LifeScience North America Corporation

Arysta LifeScience

August 14, 2007

Office of Pesticide Programs
Document Processing Desk (APPL)
U.S. Environmental Protection Agency
Room S-4900
One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Attn: Mary Waller, Product Manager 21
(703) 308-9354

Re: **Iodomethane: Response to Health Effects Division (HED) Evaluation of the Proposed Experimental Use Permit. PC Code: 000011, DP Barcode: D380043. Dated 8/6/07**

Dear Ms. Waller:

This letter responds to the subject HED review. Mike Allan from Arysta and Jeff Dawson, HED, had a chance to discuss the review and Arysta's response during a field tour in Florida last week. I believe that this response is consistent with their discussions.

Included with this response are two versions of a revised, proposed EUP label. One version shows the minor changes made in response to the HED review (track changes), and the second version is a clean copy of the revised label.

Application to Bare Soil and Use of Tarps

The term "bare soil" is mentioned in several places in the Experimental Use Permit (EUP) Application. Concern was raised in the HED review that "bare soil" applications would not be tarped. This was never the intent. All applications covered by the EUP will be tarped either with plastic mulch (raised bed) or a tarp (broadcast, i.e., flat fume).

The review further indicates that the use of a tarp appears to be optional for raised bed drip fumigation (drip irrigation, chemigation) in the proposed EUP label. Arysta did not intend for the tarp use to be optional, and has revised the label to make it clear that a tarp is required for all application methods.

Drip Applications and Buffer Zones

The HED review correctly reports that drip applications have been added to the EUP program for the second year of fieldwork under the EUP. The review further states that buffer zones need to be calculated for drip irrigation methods, and also raised questions concerning available data to support buffer zone calculations.

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There are available data from flux studies submitted to the Agency covering raised bed, drip applications (MRID Nos. 46463601, 46203701, and 46385201). Flux rates for raised bed shank and raised bed drip applications are quite comparable (within a few percentage points of each other). Recognizing that the buffer zones in the proposed label are based on the most conservative factors (e.g., weather and flux) and HECs that EPA has revised upward in its latest risk assessment (noted in the HED review), Arysta believes that the buffer zones specified in the buffer zone table in the proposed label are conservative and protective for either raised bed shank or drip application.

Data are not available for flat fume drip irrigation applications. However, Arysta believes the available broadcast shank application data provide worse case flux rates compared to drip irrigation in which the irrigation tubes are buried in the soil. In addition, the combination of fumigant plus water serves to provide a longer concentration over time interval and a better flux profile compared to the use of shank injectors in which the fumigants are applied "neat" (i.e., without water). Furthermore, as stated above, the buffer zones specified in the proposed label are based on conservative assumptions and lower HECs than the HECs now used by EPA. Therefore, it is Arysta's opinion that the Agency should consider the buffer zones specified in the proposed EUP label for broadcast applications to be adequately protective.

Note that the footnote to the table on EUP Buffer Zones in the proposed label has been changed to add in the single experiment on flat fume that is going to be greater than 2 acres. This indirect flux study in Manteca, California will need to be 2.5 acres to satisfy the experimental requirements of an indirect flux study. However, the application rate, 200 lbs MIDAS 50:50/acre (100 lbs of iodomethane) is low due to the use of highly retentive films and or Symmetry technology. The footnote establishes a 115 ft EUP Buffer Zone for this 2.5 acre, 200 lbs/acre trial, corresponding to the same buffer zone being established by the EPA last year for this EUP for the equivalent 2.0 acre, 250 lbs/acre trials.

Need to Modify Tarp Removal Schedule

The HED review notes that the label modifies the tarp removal schedule when highly retentive films are used in raised bed applications, and recommends that a similar modification be made for flat fume, broadcast applications. Arysta notes that highly retentive films are not currently used for broadcast applications. However, they may become available in 2008, and it would be useful to have the flexibility to conduct field-testing using such films within the EUP testing program. Thus, we have modified the label to respond to the HED recommendation.

Symmetry

The HED review requests that field notes be collected in all fieldwork utilizing Symmetry equipment. Arysta is aware of the need and plans to carefully document the use of Symmetry, and is hopeful that Symmetry information will be useful not only to Arysta but also EPA and CDPR as the agencies evaluate ways to reduce emissions from treated fields for iodomethane and other fumigants.

Posting, Control of Treated Areas and Buffer Zones, and Treating Multiple Fields

Finally, on page 6 of the EPA review, HED indicates that posting appears to be required around treated areas rather than around buffer zone areas during the 48 hour restricted entry interval (REI). As in the current program, posted warning signs are intended to be around buffer zone areas; the label has been clarified in this regard.

HED also raised some concern about the label language requirements for supervisors of experimental work to prohibit people and animals to be in the buffer zone areas. The supervisor control language in the proposed label is identical to the language approved by EPA for the ongoing EUP, and Arysta notes that unintended intruders have not been a problem during current EUP fieldwork.

HED's last issue was to indicate that a separation zone of one half mile is needed between treated fields in localized areas. Such a separation zone is required in the ongoing EUP and is specified on the proposed label.

This response to the HED review and the revised proposed EUP labels address each of the issues raised in the review. Should you need more information or have any questions, please contact me at (919) 678-4886 or Rick Tinsworth at (202)-772 -4912.

Sincerely,

Abraham J. Tobia

Abraham J. Tobia, PhD, MS
Regulatory Manager/Toxicology Manager
Arysta LifeScience North America Corporation

cc: Mike Allan, Arysta LifeScience North America Corporation
Becky Rhodes, Arysta LifeScience North America Corporation
Rick Tinsworth, Exponent, Inc.

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

- [ ] Registration
- [ ] Amendment
- [x] Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number: 66330-EUP-37

2. EPA Product Manager: Mary Waller

3. Proposed Classification: [x] None [ ] Restricted

4. Company/Product (Name): Iodomethane

PM#: 21

5. Name and Address of Applicant *(Include ZIP Code)*

Arysta LifeScience North America Corporation
15401 Weston Parkway, Ste. 150
Cary, North Carolina 27513

[ ] *Check if this is a new address*

6. **Expedited Reveiw.** In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [x] Resubmission in response to Agency letter dated 8/6/07
- [ ] Notification - Explain below.
- [ ] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [ ] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify)
* *Certification must be submitted*	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information: [ ] Label [ ] Container

4. Size(s) Retail Container

5. Location of Label Directions: [ ]

6. Manner in Which Label is Affixed to Product: [ ] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Robert Stewart, Technology Sciences Group, Inc.	Regulatory Consultant	(202) 828-8963

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature

3. Title: Regulatory Consultant to Arysta LifeScience North America

4. Typed Name: Robert Stewart

5. Date: August 14, 2007

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

FOR EXPERIMENTAL USE ONLY

Not for sale to any person other than a participant or cooperator of the EPA-approved experimental use.

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS™ 50:50

For Experimental Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	50.00%
Chloropicrin	50.00%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.95 pounds Iodomethane and 7.95 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille. (If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.

	• Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBERS For 24-hour chemical emergency (spill, leak, fire or accident) assistance: Call CHEMTREC at 1-800-424-9300. For 24-hour emergency medical assistance: Call 1-800-228-5635 Ext. 174 For the Poison Control Center: Call 1-800-222-1222	
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.	

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA EUP No.: 66330–EUP-37 Net Contents _____
EPA Est. No.: ___ - __

Arysta LifeScience North America
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

CHLOROPICRIN WARNING: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading devices, such as Kitagawa tubes, certified for chloropicrin. Persons involved in the Experimental Use application of MIDAS 50:50 or in reentry into buffer zones or treated fields must wear an air-purifying respirator when required by the restrictions given in the "AGRICULTURAL USE REQUIREMENTS" section (below). In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- When handling the product (e.g. the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or

couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.

USER SAFETY REQUIREMENTS

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning / maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing. If clothing is drenched or heavily contaminated with this product, discard clothing or absorbent materials (e.g. leather) - do not reuse them.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH APPROVED EXPERIMENTAL USE PROGRAM.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only certified applicators and workers under their direct supervision trained in the proper handling, worker protection and application of MIDAS soil fumigant may be present in the treatment area or buffer zone during application. Application tasks that require certification or to be performed under the direct supervision of a certified applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher. All such personnel must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions:
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person - other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling – is PROHIBITED from the start of the application until 48 hours after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Non-handler entry is prohibited while tarps are being removed.
Entry Restrictions into the EUP Buffer Zones are defined in the Section "Prohibition of Entry Into EUP Buffer Zones" below.

Notification at Entrances to Treated Areas and EUP Buffer Zones:
Notify all workers of the fumigation verbally and by posting warning signs at entrances to EUP Buffer Zones (EUP Buffer Zones are defined in the next section). The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) Name of this product, and
(6) Name, address, and telephone number of the applicator.

Post these fumigant warning signs instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal. These fumigant warning signs shall be posted for no less than 48 hours after treatment.

Prohibition of Entry Into EUP Buffer Zones:

- From the start of the application until 48 hours after the application of MIDAS 50:50 has ended, the supervisors of experimental work under this EUP shall prohibit persons and domestic animals from being present in areas adjacent to the treated field. These adjacent areas are referred to as the EUP Buffer Zones.

- An EUP Buffer zone shall extend from the edge of the treated area in all directions, to a distance calculated per the directions below. The minimum EUP Buffer Zone distance shall be 60 feet from the edge of the treated area.

- Any activity which results in a person being present within the EUP Buffer Zone during the 48 hour period following application is prohibited unless the task is permitted under the WPS. Correctly trained handlers wearing appropriate PPE and performing a task that is permitted by this labeling may enter inside the Buffer Zone. Examples of activities that are prohibited are work or recreation within a Buffer Zone, or occupation of structures that are within a Buffer Zone while

the Buffer Zone is in effect. Examples of activities that are not prohibited are driving past the treated field or occupying a structure that is not within the Buffer Zone.

For this Experimental Use of MIDAS 50:50, the following restrictions apply:

- The areas treated with MIDAS 50:50 shall not exceed 20 field acres (sometimes referred to as "real estate acres") for bedded fumigation applications. For ornamental or strawberry nursery crops broadcast or flat fumigation applications will be allowed on fields of up to two (2) acres. In California, broadcast or flat fumigation applications will be allowed for comparing application equipment and techniques on fields up to five (5) acres. For the purposes of this Experimental Use Permit, applications shall not be made to fields that are within a ½ mile of each other, unless the combined acreage does not exceed the above restriction, or the application timelag between the two applications is at least 24 hours.
- The EUP Buffer Zone shall depend on the field-equivalent rate (Lbs MIDAS 50:50/Acre) and field size, as follows:
  - The application rate for this EUP program shall be limited to a maximum of 350 lbs product per treated acre. In bedded applications, the treated acreage differs from the field acreage because only the rows are treated. As row width and spacing will vary, a "field-equivalent" rate range is possible. For broadcast applications, "field acre", "treated acre" and "real estate acre" are equivalent terms.
  - To calculate the field rate equivalent to the actual raised bed application rate, multiply the treated rate by the appropriate Field Rate Modifier from the table below:

Field Rate Modifier Table

Row Spacing (inches)	Bed Width (inches)	Field Rate Modifier
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

For example, the field-equivalent rate for application using 72 inch

row spacing and 36 inch bed width is 300 lbs product /Acre x 0.50 = 150 lbs product /Acre.

- To determine the size of the buffer zone required for an EUP application, use the field-equivalent rate calculated above and the field acreage of the application, in the table below.

EUP Buffer Zone Table (feet) – field-equivalent rate*

Field size	Up to 120 lbs product /A	> 120 to 180 lbs product /A
Up to 5 acres	60	115
>5 to 10 acres	60	250
>10 to 20 acres	150	445

*: For broadcast applications on fields destined for ornamental and strawberry nursery crops (fields that this EUP limits to no larger than 2 acres per site), the buffer zone distance shall be fixed at 50 feet for 200 lbs of product, 115 feet for 250 lbs of product, 180 feet for 300 lbs of product, and 250 feet for 350 lbs of product. In California, for the single broadcast application onto 2.5 acres at a rate of up to 200 lbs of product per acre, the buffer zone distance shall be fixed at 115 feet.

PPE For Reentry During the Entry-Restricted Period:
Reentry within the treated area within the 48 hour restricted period is limited to inspection and repair of tarping material allowed by this labeling. Reentry within the EUP Buffer Zone adjacent to the treated area within the 48 hour restricted period is limited to tasks permitted under the WPS. The PPE required for these tasks are listed in the "Personal Protective Equipment" section of this label's PRECAUTIONARY STATEMENTS.

Precautions for Usage Prior to, During and After All Soil Applications:

Prior to Fumigant Applications:

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs:
  - The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing the following:
    - Skull and crossbones symbol.
    - "DANGER/PELIGRO".
    - "Area under fumigation. DO NOT ENTER/NO ENTRE."
    - "Iodomethane and Chloropicrin Fumigants in Use."
    - The date and time of fumigation,
    - Name of this product, and
    - The name, address, and telephone number of the applicator.
- Comply with all local ordinances and regulations.

- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. Consult the local weather forecast in the surrounding region for reports of expected inversion layers during application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two trained people must be present during handling and application of soil fumigants.
- Certified applicators are responsible for providing all other workers information about precautions and procedures in the safe handling, worker protection and application of MIDAS for soil fumigation. Application tasks include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers positioned "upwind" from the container and where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."
- Soil preparation of the treatment area should be reasonably free of trash and in good tilth prior to soil treatment.
- Do not apply to wet or cold soils (<55°F at a depth of 8 inches).

During All Fumigant Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Fumigant Applications:

- Keep all pets, livestock and other domestic animals out of the treated areas until after the tarpaulin has been removed.
- Remove the plastic tarps with a minimum of two trained people present during the operation.
- Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 48 hours following application. Signs must remain legible during entire posting period.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site.
- Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Spill and Leak Procedures:

- Cease all operations if any leak develops in the fumigation system.
- Evacuate Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind, if possible.
- For entry into the area to correct the problem, trained personnel must wear all personal protective equipment required by this label, including either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TS-19C) OR (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipment handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center (800-424-8802).

General Information and Instructions

This fumigant is a highly hazardous material. It is a restricted use pesticide that must only be used by or under the direct supervision of individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

SOIL BORNE PESTS CONTROLLED: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases such as those caused by Phytophthora, Pythium, Fusarium, Verticillium and Rhizoctonia. Soil Fumigation using MIDAS 50:50 must be conducted according to directions and conditions of use described in this label. Application of this product will control only those pests present in the soil at time of soil treatment. It is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

SOIL PREPARATION: Prior to the application of soil fumigants, the ground must be sufficiently moist to allow seeds to swell (imbibe) in preparation for germination. The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment with soil fumigants.

FIELD FUMIGATION: Apply MIDAS 50:50 by shank fumigation or drip application. For shank fumigation use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed, utilizing a mechanical tarp layer, with a gas-tight plastic tarpaulin immediately following the chisel, as detailed below under "Iodomethane Pre-Plant Field Fumigation Methods". Tarps must remain on the soil for at least 5 days prior to cutting and removal.

PLANTING INTERVAL FOR ALL APPLICATIONS:

- Do not plant for at least 10 days after application of the fumigant. A longer period before planting is necessary when using highly retentive film (see tables below) and may be necessary if the soil is wet or cold.
- If tarpaulins are removed, planting can occur 10 days after application. This period includes the minimum 5 days of sealed fumigation prior to tarp cutting plus the minimum of 24 hours of aeration after the tarpaulins have been cut before they are removed.
- If tarpaulins are not to be removed before planting, then planting shall not occur before either:
    - At least 12 days after application, including at least 24 hours after holes have been cut in the tarpaulin to allow for aeration; or
    - At least 14 days after application. In this case, tarpaulins do not need to be cut or aerated prior to planting. However, if this option is chosen, the chloropicrin air concentration below the tarpaulin must be less than 0.1 parts per million before planting begins.

To minimize the potential for crop injury, allow the fumigant to dissipate completely before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin used in MIDAS 50:50 is detectable.

TARPAULIN CUTTING AND REMOVAL:

- Following the completion of the application of MIDAS 50:50 (including, when applicable, the formation of cross ditches), the tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.
    - If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed, a task which cannot occur until a minimum of 5 days after application, as stated above.

CROP ROTATION RESTRICTIONS

Crops other than strawberry, tomatoes, peppers require a 4 month plant back rotation restriction. Strawberries, fresh market tomatoes and peppers can be planted into treated soil as soon as crop safety can be assured and no sooner than 10 days after treatment. See Planting Interval for specific instructions.

Application by Bed Shank fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below. Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

BEDDED PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Application by Broadcast or Flat fumigation: Use dosage rates and planting intervals as indicated in the Broadcast Pre-Plant Soil Fumigation Table below. Broadcast or Flat fumigation shall be restricted to field-grown ornamentals and strawberry nurseries and field sizes shall not exceed two (2) acres. Refer to the "AGRICULTURAL USE REQUIREMENTS" box for additional restrictions.

BROADCAST PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Acre	Time Between Application and Planting*
Field-Grown Ornamentals	300 lbs / Acre (18.9 gal / Acre)	10 – 14 days 14 - 21 days when using highly retentive films**
Strawberry Nursery	350 lbs /Acre (22 gal/Acre)	10 – 14 days

* If odors of fumigant persist beyond the two-week period you may disc, plow or chisel the soil to help aeration in a flat fume (broadcast) fumigation operation. An air-purifying respirator shall be worn during these activities if the airborne concentration of chloropicrin is determined to be 0.1 ppm or greater when measured with a direct reading device such as a Kitagawa tube. Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

**Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

IODOMETHANE PRE-PLANT FIELD FUMIGATION METHODS:
During the Experimental Use Permit program, fumigations with MIDAS 50:50 shall be performed in accordance with the following application techniques.

Tarpaulin/Bedded

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
  - Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- The tarpaulin shall not be cut for at least 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Tarpaulin/Broadcast (ornamental and strawberry nursery crops only)

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface. The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Application by Raised Bed Drip Fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below and follow the instructions provided below under Drip Fumigation (Chemigation). Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

Bedded Pre-Plant Drip Fumigation Table

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

DRIP FUMIGATION (CHEMIGATION):

Apply this product only through buried drip tape or equivalent irrigation system. Do not use this product through any other type of irrigation system. As required for all applications of this product, treated areas must be covered with a plastic tarpaulin for a minimum of 5 days following application (see Precautions for Usage Prior to, During, and After All Soil Application section).

General Instructions for Drip Fumigation:

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- Only a person knowledgeable of the chemigation system and responsible for its operation, or persons under their direct supervision shall operate the system and make the necessary adjustments, should the need arise.
- Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- "Public water system" means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regulatory serves an average of at least 25 individuals daily at least 60 days out of the year.

- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed, automatic valve located on the intake side of the injection pump or inert gas pressurized cylinder and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) or an inert gas pressurized cylinder effectively designed and constructed of materials that are compatible with a system interlock.

Application by Drip Fumigation:

- Use dosage rates and planting interval times as indicated in the Pre-Plant Fumigation Table (above). Drip applications may be made at the broadcast rates but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.
- MIDAS 50:50 with emulsifying agent may be applied through buried drip tape. Use of a tarp seal is required for all applications of this product.
- The dilution rate for drip-line fumigation is 1,400 - 2000 ppm. One gallon of MIDAS 50:50 with emulsifying agent in 2650 gallons of water is equivalent to 1,000 ppm. MIDAS 50:50 with emulsifying agent must be metered into the water.
- Soil must be in good tilth and condition, free of clods and un-decomposed soil material.
- Use drip irrigation components made of brass, stainless steel, copper, nickel, polypropylene, polyethylene, Teflon, viton, rigid PVC, and EPDM. Rigid PVC must not be exposed to undiluted MIDAS 50:50 with emulsifying agent or more than 2000 ppm MIDAS 50:50 with emulsifying agent in the diluted form. Do not use aluminum, vinyl, plastic (other than polypropylene or polyethylene), zinc or alloys.
- In very sandy soils, apply MIDAS 50:50 with emulsifying agent when soil moisture conditions throughout the treatment zone are near field capacity. When necessary, apply a pre-treatment amount of water to wet the bed

and enhance even movement of the material through the soil profile at time of treatment.

- MIDAS 50:50 with emulsifying agent must be monitored as it enters the irrigation system and must pass through a static mixer, coarse filter, or fine strainer or equivalent devices to insure proper mixing before it is distributed through the irrigation system. Do not allow treatment solution to accumulate on the soil surface. Do not allow treatment solution to pond, puddle or run-off. If run-off occurs, discontinue the application immediately and cover the contaminated soil area with clean soil to absorb the material.
- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent back flow contamination of the water source.
- The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the chemical supply or injection pump.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Pump types must be suitable for the injection of corrosive materials and capable of being fitted with a system interlock. Injection systems must use a metering pump, such as a positive displacement or diaphragm pump, venturi system or a pressure safe cylinder containing MIDAS 50:50 with emulsifying agent equipped with a metering valve and flow meter.
- Following application, continue to apply irrigation water to rinse the irrigation system of any MIDAS 50:50 with emulsifying agent. Make sure any rigid dead end or low spots are drained or flushed completely. DO NOT ALLOW MIDAS 50:50 WITH EMULSIFYING AGENT TO REMAIN IN THE IRRIGATION SYSTEM. Leave the soil undisturbed for at least 10 days after fumigation, and then proceed with normal agricultural practices for crop management activities.

STORAGE, HANDLING AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be

firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers should never be refilled by the consumer or used for any other product or purpose.

CONDITIONS OF SALE

1. Arysta LifeScience North America Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use.
2. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arysta LifeScience North America. **ARYSTA LIFESCIENCE NORTH AMERICA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. TO THE EXTENT ALLOWED BY LAW, SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. ARYSTA LIFESCIENCE NORTH AMERICA DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**
3. Critical and unforeseeable factors beyond Arysta LifeScience North America's control (including but not limited to weather conditions, crop conditions, presence of other materials, use or application of the product in a manner inconsistent with its labeling, or other influencing factors in the

use of this product) prevent Arysta LifeScience North America from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which the product is applied, and lack of complete control Except as stated in 1 above, to the extent allowed by law, Buyer and User acknowledge and assume all risks and liabilities resulting from handling, storage, and use of this product.

MIDAS is a trademark of Arysta LifeScience North America Corporation

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Dr. Abraham J. Tobia
Consulting Regulatory Manager
Registration and Regulatory Affairs
Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150
Cary, NC 27513

AUG 31 2007

Subject: Midas 50:50
EPA Experimental Use Permit No. 66330-EUP-37
Your Request of May 21, 2007 for Revision of the Effective Dates and Provisions of the Experimental Use Program
Effective Dates: August 31, 2007 – August 31, 2008
Quantity Authorized: 150,000 lbs. of Midas 50:50
Active Ingredient: 75,000 lbs. iodomethane
75,000 lbs. chloropicrin
Acres to be treated: 1,000 acres

Dear Dr. Tobia:

On the basis of the information furnished by the applicant, the Experimental Use Permit (EUP) granted under Section 5 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (86 Stat. 983), is hereby extended and revised for the named pesticide provided the following label revisions are made and the following conditions are met:

Label Revisions

1. The EPA Experimental Use Permit Number 66330-EUP-37 must appear on the revised label.

2. On page 1, move the restricted use box to the very top of the page.

3. On page 1, add the word "program" to the end of the sentence "Not for sale to any person other…".

4. On page 4, under User Safety Recommendations, delete "If clothing is drenched or heavily contaminated . . . do not reuse them." This information appears under the User Safety Requirements, and it important to be clear about what action is a requirement versus a recommendation.

5. On page 5, delete the following sentence "The requirements in this box only apply to uses of this product. . . (WPS)."

6. On page 8, revise the buffer zone from "50 ft." to "60 ft." in the first sentence under the table.

7. On pages 13 and 15, in all places where the sentence "Contact your Arysta LifeScience representative for rate recommendations." appears, revise the sentence to read "Contact your . . . for rate reduction recommendations.

8. On page 17, revise the word "should" to "shall" in the first sentence in the "Handling" section in the Storage and Disposal box.

9. On page 18, revise the word "should" to "shall" in the last sentence in the "Return of Containers" section.

Experimental Use Program Conditions:

1. All conditions of the experimental use program remain as previously approved except for the following revisions:
   a. The EUP is amended by adding the State of CA.
   b. Thirty acres is transferred to CA from the 600 acres previously allocated for FL.
   c. The label is amended to add drip irrigation and the application rate increase from 300 lbs to 350 lbs/product/acre for designated application methods.

2. The three field volatility studies required as a condition of the initial registration of this experimental use permit must be submitted to the Agency no later than November 30, 2007.

3. Prior to shipment and/or use of this material, you must consult with the State Pesticide Regulatory Officials of the States in which your experimental program will be conducted and obtain a state permit license if such is required. Issuance of this federal permit does not negate the need for permission from the individual states. Failure to do so may result in revocation or modification of this experimental use permit.

4. You must comply with section 172.8(b)(2) which states: "A final report shall be submitted within 180 days after the expiration of the permit, unless a request for extension of time is approved, and shall include: (i) All data gathered during the testing

program; field notes need not be submitted but must be maintained and submitted upon request; and (ii) A description of the disposition of any pesticide containers and any unused pesticide including amounts disposed of and the method and site of disposition.

Shipment and/or use under this permit are subject to the provisions of 40 CFR 172. Based upon the experimental program, this product may be shipped for use under this permit to cooperators in the following States: Florida, Georgia, Michigan, North Carolina, South Carolina, Tennessee, California, and Virginia.

A stamped copy of the approved label is enclosed for your records. This labeling, with the required changes must be used for all shipments under this EUP. Submit one copy of the revised labeling for our records.

Sincerely,

Cynthia Giles-Parker, Chief
Fungicide Branch
Registration Division (7505P)

Enclosure

ACCEPTED
for shipment and use of product for experimental purposes under the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act, subject to attached comments.
Permit No. 66330-EUP-37
Issued on 8-31-2007

FOR EXPERIMENTAL USE ONLY
Not for sale to any person other than a participant or cooperator of the EPA-approved experimental use.

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS™ 50:50

For Experimental Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	50.00%
Chloropicrin	50.00%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.95 pounds Iodomethane and 7.95 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille. (If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.

	• Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBERS For 24-hour chemical emergency (spill, leak, fire or accident) assistance: Call CHEMTREC at 1-800-424-9300. For 24-hour emergency medical assistance: Call 1-800-228-5635 Ext. 174 For the Poison Control Center: Call 1-800-222-1222	
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.	

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA EUP No.: 66330–EUP-37 Net Contents _____
EPA Est. No.: ___ - __

Arysta LifeScience North America
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

CHLOROPICRIN WARNING: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading devices, such as Kitagawa tubes, certified for chloropicrin. Persons involved in the Experimental Use application of MIDAS 50:50 or in reentry into buffer zones or treated fields must wear an air-purifying respirator when required by the restrictions given in the "AGRICULTURAL USE REQUIREMENTS" section (below). In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- When handling the product (e.g. the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or

couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.

USER SAFETY REQUIREMENTS

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning / maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing. If clothing is drenched or heavily contaminated with this product, discard clothing or absorbent materials (e.g. leather) - do not reuse them.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH APPROVED EXPERIMENTAL USE PROGRAM.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only certified applicators and workers under their direct supervision trained in the proper handling, worker protection and application of MIDAS soil fumigant may be present in the treatment area or buffer zone during application. Application tasks that require certification or to be performed under the direct supervision of a certified applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher. All such personnel must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions:
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person - other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling – is PROHIBITED from the start of the application until 48 hours after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Non-handler entry is prohibited while tarps are being removed.
Entry Restrictions into the EUP Buffer Zones are defined in the Section "Prohibition of Entry Into EUP Buffer Zones" below.

Notification at Entrances to Treated Areas and EUP Buffer Zones:
Notify all workers of the fumigation verbally and by posting warning signs at entrances to EUP Buffer Zones (EUP Buffer Zones are defined in the next section). The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) Name of this product, and
(6) Name, address, and telephone number of the applicator.

Post these fumigant warning signs instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal. These fumigant warning signs shall be posted for no less than 48 hours after treatment.

Prohibition of Entry Into EUP Buffer Zones:

- From the start of the application until 48 hours after the application of MIDAS 50:50 has ended, the supervisors of experimental work under this EUP shall prohibit persons and domestic animals from being present in areas adjacent to the treated field. These adjacent areas are referred to as the EUP Buffer Zones.

- An EUP Buffer zone shall extend from the edge of the treated area in all directions, to a distance calculated per the directions below. The minimum EUP Buffer Zone distance shall be 60 feet from the edge of the treated area.

- Any activity which results in a person being present within the EUP Buffer Zone during the 48 hour period following application is prohibited unless the task is permitted under the WPS. Correctly trained handlers wearing appropriate PPE and performing a task that is permitted by this labeling may enter inside the Buffer Zone. Examples of activities that are prohibited are work or recreation within a Buffer Zone, or occupation of structures that are within a Buffer Zone while

the Buffer Zone is in effect. Examples of activities that are not prohibited are driving past the treated field or occupying a structure that is not within the Buffer Zone.

For this Experimental Use of MIDAS 50:50, the following restrictions apply:

- The areas treated with MIDAS 50:50 shall not exceed 20 field acres (sometimes referred to as "real estate acres") for bedded fumigation applications. For ornamental or strawberry nursery crops broadcast or flat fumigation applications will be allowed on fields of up to two (2) acres. In California, broadcast or flat fumigation applications will be allowed for comparing application equipment and techniques on fields up to five (5) acres. For the purposes of this Experimental Use Permit, applications shall not be made to fields that are within a ½ mile of each other, unless the combined acreage does not exceed the above restriction, or the application timelag between the two applications is at least 24 hours.
- The EUP Buffer Zone shall depend on the field-equivalent rate (Lbs MIDAS 50:50/Acre) and field size, as follows:
  - The application rate for this EUP program shall be limited to a maximum of 350 lbs product per treated acre. In bedded applications, the treated acreage differs from the field acreage because only the rows are treated. As row width and spacing will vary, a "field-equivalent" rate range is possible. For broadcast applications, "field acre", "treated acre" and "real estate acre" are equivalent terms.
  - To calculate the field rate equivalent to the actual raised bed application rate, multiply the treated rate by the appropriate Field Rate Modifier from the table below:

Field Rate Modifier Table

Row Spacing (inches)	Bed Width (inches)	Field Rate Modifier
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

For example, the field-equivalent rate for application using 72 inch

row spacing and 36 inch bed width is 300 lbs product /Acre x 0.50 = 150 lbs product /Acre.

- To determine the size of the buffer zone required for an EUP application, use the field-equivalent rate calculated above and the field acreage of the application, in the table below.

EUP Buffer Zone Table (feet) – field-equivalent rate*

Field size	Up to 120 lbs product /A	> 120 to 180 lbs product /A
Up to 5 acres	60	115
>5 to 10 acres	60	250
>10 to 20 acres	150	445

*: For broadcast applications on fields destined for ornamental and strawberry nursery crops (fields that this EUP limits to no larger than 2 acres per site), the buffer zone distance shall be fixed at 50 feet for 200 lbs of product, 115 feet for 250 lbs of product, 180 feet for 300 lbs of product, and 250 feet for 350 lbs of product. In California, for the single broadcast application onto 2.5 acres at a rate of up to 200 lbs of product per acre, the buffer zone distance shall be fixed at 115 feet.

PPE For Reentry During the Entry-Restricted Period:
Reentry within the treated area within the 48 hour restricted period is limited to inspection and repair of tarping material allowed by this labeling. Reentry within the EUP Buffer Zone adjacent to the treated area within the 48 hour restricted period is limited to tasks permitted under the WPS. The PPE required for these tasks are listed in the "Personal Protective Equipment" section of this label's PRECAUTIONARY STATEMENTS.

Precautions for Usage Prior to, During and After All Soil Applications:

Prior to Fumigant Applications:

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs:
  - The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing the following:
    - Skull and crossbones symbol.
    - "DANGER/PELIGRO".
    - "Area under fumigation. DO NOT ENTER/NO ENTRE."
    - "Iodomethane and Chloropicrin Fumigants in Use."
    - The date and time of fumigation,
    - Name of this product, and
    - The name, address, and telephone number of the applicator.
- Comply with all local ordinances and regulations.

- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. Consult the local weather forecast in the surrounding region for reports of expected inversion layers during application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two trained people must be present during handling and application of soil fumigants.
- Certified applicators are responsible for providing all other workers information about precautions and procedures in the safe handling, worker protection and application of MIDAS for soil fumigation. Application tasks include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers positioned "upwind" from the container and where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."
- Soil preparation of the treatment area should be reasonably free of trash and in good tilth prior to soil treatment.
- Do not apply to wet or cold soils (<55°F at a depth of 8 inches).

During All Fumigant Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Fumigant Applications:

- Keep all pets, livestock and other domestic animals out of the treated areas until after the tarpaulin has been removed.
- Remove the plastic tarps with a minimum of two trained people present during the operation.
- Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 48 hours following application. Signs must remain legible during entire posting period.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site.
- Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Spill and Leak Procedures:

- Cease all operations if any leak develops in the fumigation system.
- Evacuate Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind, if possible.
- For entry into the area to correct the problem, trained personnel must wear all personal protective equipment required by this label, including either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TS-19C) OR (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipment handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center (800-424-8802).

General Information and Instructions

This fumigant is a highly hazardous material. It is a restricted use pesticide that must only be used by or under the direct supervision of individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

SOIL BORNE PESTS CONTROLLED: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases such as those caused by Phytophthora, Pythium, Fusarium, Verticillium and Rhizoctonia. Soil Fumigation using MIDAS 50:50 must be conducted according to directions and conditions of use described in this label. Application of this product will control only those pests present in the soil at time of soil treatment. It is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

SOIL PREPARATION: Prior to the application of soil fumigants, the ground must be sufficiently moist to allow seeds to swell (imbibe) in preparation for germination. The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment with soil fumigants.

FIELD FUMIGATION: Apply MIDAS 50:50 by shank fumigation or drip application. For shank fumigation use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed, utilizing a mechanical tarp layer, with a gas-tight plastic tarpaulin immediately following the chisel, as detailed below under "Iodomethane Pre-Plant Field Fumigation Methods". Tarps must remain on the soil for at least 5 days prior to cutting and removal.

PLANTING INTERVAL FOR ALL APPLICATIONS:

- Do not plant for at least 10 days after application of the fumigant. A longer period before planting is necessary when using highly retentive film (see tables below) and may be necessary if the soil is wet or cold.
- If tarpaulins are removed, planting can occur 10 days after application. This period includes the minimum 5 days of sealed fumigation prior to tarp cutting plus the minimum of 24 hours of aeration after the tarpaulins have been cut before they are removed.
- If tarpaulins are not to be removed before planting, then planting shall not occur before either:
    - At least 12 days after application, including at least 24 hours after holes have been cut in the tarpaulin to allow for aeration; or
    - At least 14 days after application. In this case, tarpaulins do not need to be cut or aerated prior to planting. However, if this option is chosen, the chloropicrin air concentration below the tarpaulin must be less than 0.1 parts per million before planting begins.

To minimize the potential for crop injury, allow the fumigant to dissipate completely before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin used in MIDAS 50:50 is detectable.

TARPAULIN CUTTING AND REMOVAL:

- Following the completion of the application of MIDAS 50:50 (including, when applicable, the formation of cross ditches), the tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.
    - If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed, a task which cannot occur until a minimum of 5 days after application, as stated above.

CROP ROTATION RESTRICTIONS

Crops other than strawberry, tomatoes, peppers require a 4 month plant back rotation restriction. Strawberries, fresh market tomatoes and peppers can be planted into treated soil as soon as crop safety can be assured and no sooner than 10 days after treatment. See Planting Interval for specific instructions.

Application by Bed Shank fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below. Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

BEDDED PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Application by Broadcast or Flat fumigation: Use dosage rates and planting intervals as indicated in the Broadcast Pre-Plant Soil Fumigation Table below. Broadcast or Flat fumigation shall be restricted to field-grown ornamentals and strawberry nurseries and field sizes shall not exceed two (2) acres. Refer to the "AGRICULTURAL USE REQUIREMENTS" box for additional restrictions.

BROADCAST PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Acre	Time Between Application and Planting*
Field-Grown Ornamentals	300 lbs / Acre (18.9 gal / Acre)	10 – 14 days 14 - 21 days when using highly retentive films**
Strawberry Nursery	350 lbs /Acre (22 gal/Acre)	10 – 14 days

* If odors of fumigant persist beyond the two-week period you may disc, plow or chisel the soil to help aeration in a flat fume (broadcast) fumigation operation. An air-purifying respirator shall be worn during these activities if the airborne concentration of chloropicrin is determined to be 0.1 ppm or greater when measured with a direct reading device such as a Kitagawa tube. Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

**Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

IODOMETHANE PRE-PLANT FIELD FUMIGATION METHODS:
During the Experimental Use Permit program, fumigations with MIDAS 50:50 shall be performed in accordance with the following application techniques.

Tarpaulin/Bedded

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
  - Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- The tarpaulin shall not be cut for at least 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Tarpaulin/Broadcast (ornamental and strawberry nursery crops only)

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface. The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Application by Raised Bed Drip Fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below and follow the instructions provided below under Drip Fumigation (Chemigation). Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

Bedded Pre-Plant Drip Fumigation Table

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

DRIP FUMIGATION (CHEMIGATION):

Apply this product only through buried drip tape or equivalent irrigation system. Do not use this product through any other type of irrigation system. As required for all applications of this product, treated areas must be covered with a plastic tarpaulin for a minimum of 5 days following application (see Precautions for Usage Prior to, During, and After All Soil Application section).

General Instructions for Drip Fumigation:

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- Only a person knowledgeable of the chemigation system and responsible for its operation, or persons under their direct supervision shall operate the system and make the necessary adjustments, should the need arise.
- Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- "Public water system" means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regulatory serves an average of at least 25 individuals daily at least 60 days out of the year.

- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed, automatic valve located on the intake side of the injection pump or inert gas pressurized cylinder and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) or an inert gas pressurized cylinder effectively designed and constructed of materials that are compatible with a system interlock.

Application by Drip Fumigation:

- Use dosage rates and planting interval times as indicated in the Pre-Plant Fumigation Table (above). Drip applications may be made at the broadcast rates but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.
- MIDAS 50:50 with emulsifying agent may be applied through buried drip tape. Use of a tarp seal is required for all applications of this product.
- The dilution rate for drip-line fumigation is 1,400 - 2000 ppm. One gallon of MIDAS 50:50 with emulsifying agent in 2650 gallons of water is equivalent to 1,000 ppm. MIDAS 50:50 with emulsifying agent must be metered into the water.
- Soil must be in good tilth and condition, free of clods and un-decomposed soil material.
- Use drip irrigation components made of brass, stainless steel, copper, nickel, polypropylene, polyethylene, Teflon, viton, rigid PVC, and EPDM. Rigid PVC must not be exposed to undiluted MIDAS 50:50 with emulsifying agent or more than 2000 ppm MIDAS 50:50 with emulsifying agent in the diluted form. Do not use aluminum, vinyl, plastic (other than polypropylene or polyethylene), zinc or alloys.
- In very sandy soils, apply MIDAS 50:50 with emulsifying agent when soil moisture conditions throughout the treatment zone are near field capacity. When necessary, apply a pre-treatment amount of water to wet the bed

and enhance even movement of the material through the soil profile at time of treatment.

- MIDAS 50:50 with emulsifying agent must be monitored as it enters the irrigation system and must pass through a static mixer, coarse filter, or fine strainer or equivalent devices to insure proper mixing before it is distributed through the irrigation system. Do not allow treatment solution to accumulate on the soil surface. Do not allow treatment solution to pond, puddle or run-off. If run-off occurs, discontinue the application immediately and cover the contaminated soil area with clean soil to absorb the material.
- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent back flow contamination of the water source.
- The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the chemical supply or injection pump.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Pump types must be suitable for the injection of corrosive materials and capable of being fitted with a system interlock. Injection systems must use a metering pump, such as a positive displacement or diaphragm pump, venturi system or a pressure safe cylinder containing MIDAS 50:50 with emulsifying agent equipped with a metering valve and flow meter.
- Following application, continue to apply irrigation water to rinse the irrigation system of any MIDAS 50:50 with emulsifying agent. Make sure any rigid dead end or low spots are drained or flushed completely. DO NOT ALLOW MIDAS 50:50 WITH EMULSIFYING AGENT TO REMAIN IN THE IRRIGATION SYSTEM. Leave the soil undisturbed for at least 10 days after fumigation, and then proceed with normal agricultural practices for crop management activities.

STORAGE, HANDLING AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be

firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers should never be refilled by the consumer or used for any other product or purpose.

CONDITIONS OF SALE

1. Arysta LifeScience North America Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use.
2. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arysta LifeScience North America. **ARYSTA LIFESCIENCE NORTH AMERICA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. TO THE EXTENT ALLOWED BY LAW, SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. ARYSTA LIFESCIENCE NORTH AMERICA DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**
3. Critical and unforeseeable factors beyond Arysta LifeScience North America's control (including but not limited to weather conditions, crop conditions, presence of other materials, use or application of the product in a manner inconsistent with its labeling, or other influencing factors in the

use of this product) prevent Arysta LifeScience North America from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which the product is applied, and lack of complete control Except as stated in 1 above, to the extent allowed by law, Buyer and User acknowledge and assume all risks and liabilities resulting from handling, storage, and use of this product.

MIDAS is a trademark of Arysta LifeScience North America Corporation

Arysta LifeScience

August 14, 2007

Office of Pesticide Programs
Document Processing Desk (APPL)
U.S. Environmental Protection Agency
Room S-4900
One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Attn: Mary Waller, Product Manager 21
(703) 308-9354

Re: **Iodomethane: Response to Health Effects Division (HED) Evaluation of the Proposed Experimental Use Permit. PC Code: 000011, DP Barcode: D380043. Dated 8/6/07**

Dear Ms. Waller:

This letter responds to the subject HED review. Mike Allan from Arysta and Jeff Dawson, HED, had a chance to discuss the review and Arysta's response during a field tour in Florida last week. I believe that this response is consistent with their discussions.

Included with this response are two versions of a revised, proposed EUP label. One version shows the minor changes made in response to the HED review (track changes), and the second version is a clean copy of the revised label.

Application to Bare Soil and Use of Tarps

The term "bare soil" is mentioned in several places in the Experimental Use Permit (EUP) Application. Concern was raised in the HED review that "bare soil" applications would not be tarped. This was never the intent. All applications covered by the EUP will be tarped either with plastic mulch (raised bed) or a tarp (broadcast, i.e., flat fume).

The review further indicates that the use of a tarp appears to be optional for raised bed drip fumigation (drip irrigation, chemigation) in the proposed EUP label. Arysta did not intend for the tarp use to be optional, and has revised the label to make it clear that a tarp is required for all application methods.

Drip Applications and Buffer Zones

The HED review correctly reports that drip applications have been added to the EUP program for the second year of fieldwork under the EUP. The review further states that buffer zones need to be calculated for drip irrigation methods, and also raised questions concerning available data to support buffer zone calculations.

Arysta LifeScience North America Corporation
15401 Weston Parkway, Suite 150, Cary, NC 27513 Phone 919-678-4900 Fax 919-678-2194
www.arystalifescience.com

There are available data from flux studies submitted to the Agency covering raised bed, drip applications (MRID Nos. 46463601, 46203701, and 46385201). Flux rates for raised bed shank and raised bed drip applications are quite comparable (within a few percentage points of each other). Recognizing that the buffer zones in the proposed label are based on the most conservative factors (e.g., weather and flux) and HECs that EPA has revised upward in its latest risk assessment (noted in the HED review), Arysta believes that the buffer zones specified in the buffer zone table in the proposed label are conservative and protective for either raised bed shank or drip application.

Data are not available for flat fume drip irrigation applications. However, Arysta believes the available broadcast shank application data provide worse case flux rates compared to drip irrigation in which the irrigation tubes are buried in the soil. In addition, the combination of fumigant plus water serves to provide a longer concentration over time interval and a better flux profile compared to the use of shank injectors in which the fumigants are applied "neat" (i.e., without water). Furthermore, as stated above, the buffer zones specified in the proposed label are based on conservative assumptions and lower HECs than the HECs now used by EPA. Therefore, it is Arysta's opinion that the Agency should consider the buffer zones specified in the proposed EUP label for broadcast applications to be adequately protective.

Note that the footnote to the table on EUP Buffer Zones in the proposed label has been changed to add in the single experiment on flat fume that is going to be greater than 2 acres. This indirect flux study in Manteca, California will need to be 2.5 acres to satisfy the experimental requirements of an indirect flux study. However, the application rate, 200 lbs MIDAS 50:50/acre (100 lbs of iodomethane) is low due to the use of highly retentive films and or Symmetry technology. The footnote establishes a 115 ft EUP Buffer Zone for this 2.5 acre, 200 lbs/acre trial, corresponding to the same buffer zone being established by the EPA last year for this EUP for the equivalent 2.0 acre, 250 lbs/acre trials.

Need to Modify Tarp Removal Schedule

The HED review notes that the label modifies the tarp removal schedule when highly retentive films are used in raised bed applications, and recommends that a similar modification be made for flat fume, broadcast applications. Arysta notes that highly retentive films are not currently used for broadcast applications. However, they may become available in 2008, and it would be useful to have the flexibility to conduct field-testing using such films within the EUP testing program. Thus, we have modified the label to respond to the HED recommendation.

Symmetry

The HED review requests that field notes be collected in all fieldwork utilizing Symmetry equipment. Arysta is aware of the need and plans to carefully document the use of Symmetry, and is hopeful that Symmetry information will be useful not only to Arysta but also EPA and CDPR as the agencies evaluate ways to reduce emissions from treated fields for iodomethane and other fumigants.

Posting, Control of Treated Areas and Buffer Zones, and Treating Multiple Fields

Finally, on page 6 of the EPA review, HED indicates that posting appears to be required around treated areas rather than around buffer zone areas during the 48 hour restricted entry interval (REI). As in the current program, posted warning signs are intended to be around buffer zone areas; the label has been clarified in this regard.

HED also raised some concern about the label language requirements for supervisors of experimental work to prohibit people and animals to be in the buffer zone areas. The supervisor control language in the proposed label is identical to the language approved by EPA for the ongoing EUP, and Arysta notes that unintended intruders have not been a problem during current EUP fieldwork.

HED's last issue was to indicate that a separation zone of one half mile is needed between treated fields in localized areas. Such a separation zone is required in the ongoing EUP and is specified on the proposed label.

This response to the HED review and the revised proposed EUP labels address each of the issues raised in the review. Should you need more information or have any questions, please contact me at (919) 678-4886 or Rick Tinsworth at (202)-772 -4912.

Sincerely,

Abraham J. Tobia

Abraham J. Tobia, PhD, MS
Regulatory Manager/Toxicology Manager
Arysta LifeScience North America Corporation

cc: Mike Allan, Arysta LifeScience North America Corporation
Becky Rhodes, Arysta LifeScience North America Corporation
Rick Tinsworth, Exponent, Inc.

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

United States
Environmental Protection Agency
Washington, DC 20460

- [ ] Registration
- [ ] Amendment
- [x] Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
66330-EUP-37	Mary Waller	[x] None [ ] Restricted
4. Company/Product (Name)	**PM#**	
Iodomethane	21	

5. Name and Address of Applicant *(Include ZIP Code)*

Arysta LifeScience North America Corporation
15401 Weston Parkway, Ste. 150
Cary, North Carolina 27513

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [x] Resubmission in response to Agency letter dated 8/6/07
- [ ] Notification - Explain below.
- [ ] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [ ] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[ ] Label [ ] Container		[ ]

6. Manner in Which Label is Affixed to Product [ ] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Robert Stewart, Technology Sciences Group, Inc.	Regulatory Consultant	(202) 828-8963

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received
(Stamped)

2. Signature	3. Title
	Regulatory Consultant to Arysta LifeScience North America
4. Typed Name	**5. Date**
Robert Stewart	August 14, 2007

FOR EXPERIMENTAL USE ONLY

Not for sale to any person other than a participant or cooperator of the EPA-approved experimental use.

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS™ 50:50

For Experimental Pre-Plant Fumigations of Fields Intended for Commercial Production of Listed Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	50.00%
Chloropicrin	50.00%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.95 pounds Iodomethane and 7.95 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille. (If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.

	• Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBERS For 24-hour chemical emergency (spill, leak, fire or accident) assistance: Call CHEMTREC at 1-800-424-9300. For 24-hour emergency medical assistance: Call 1-800-228-5635 Ext. 174 For the Poison Control Center: Call 1-800-222-1222	
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.	

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA EUP No.: 66330–EUP-37 Net Contents _____
EPA Est. No.: ___ - __

Arysta LifeScience North America
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

CHLOROPICRIN WARNING: This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading devices, such as Kitagawa tubes, certified for chloropicrin. Persons involved in the Experimental Use application of MIDAS 50:50 or in reentry into buffer zones or treated fields must wear an air-purifying respirator when required by the restrictions given in the "AGRICULTURAL USE REQUIREMENTS" section (below). In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- An air-purifying respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- When handling the product (e.g. the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or

couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.

USER SAFETY REQUIREMENTS

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning / maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash skin thoroughly and put on clean clothing. If clothing is drenched or heavily contaminated with this product, discard clothing or absorbent materials (e.g. leather) - do not reuse them.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH APPROVED EXPERIMENTAL USE PROGRAM.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only certified applicators and workers under their direct supervision trained in the proper handling, worker protection and application of MIDAS soil fumigant may be present in the treatment area or buffer zone during application. Application tasks that require certification or to be performed under the direct supervision of a certified applicator include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher. All such personnel must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions:
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person - other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling – is PROHIBITED from the start of the application until 48 hours after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Non-handler entry is prohibited while tarps are being removed.
Entry Restrictions into the EUP Buffer Zones are defined in the Section "Prohibition of Entry Into EUP Buffer Zones" below.

Notification at Entrances to Treated Areas and EUP Buffer Zones:
Notify all workers of the fumigation verbally and by posting warning signs at entrances to EUP Buffer Zones (EUP Buffer Zones are defined in the next section). The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) Name of this product, and
(6) Name, address, and telephone number of the applicator.

Post these fumigant warning signs instead of the WPS signs for these applications but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal. These fumigant warning signs shall be posted for no less than 48 hours after treatment.

Prohibition of Entry Into EUP Buffer Zones:

- From the start of the application until 48 hours after the application of MIDAS 50:50 has ended, the supervisors of experimental work under this EUP shall prohibit persons and domestic animals from being present in areas adjacent to the treated field. These adjacent areas are referred to as the EUP Buffer Zones.

- An EUP Buffer zone shall extend from the edge of the treated area in all directions, to a distance calculated per the directions below. The minimum EUP Buffer Zone distance shall be 60 feet from the edge of the treated area.

- Any activity which results in a person being present within the EUP Buffer Zone during the 48 hour period following application is prohibited unless the task is permitted under the WPS. Correctly trained handlers wearing appropriate PPE and performing a task that is permitted by this labeling may enter inside the Buffer Zone. Examples of activities that are prohibited are work or recreation within a Buffer Zone, or occupation of structures that are within a Buffer Zone while

the Buffer Zone is in effect. Examples of activities that are not prohibited are driving past the treated field or occupying a structure that is not within the Buffer Zone.

For this Experimental Use of MIDAS 50:50, the following restrictions apply:

- The areas treated with MIDAS 50:50 shall not exceed 20 field acres (sometimes referred to as "real estate acres") for bedded fumigation applications. For ornamental or strawberry nursery crops broadcast or flat fumigation applications will be allowed on fields of up to two (2) acres. In California, broadcast or flat fumigation applications will be allowed for comparing application equipment and techniques on fields up to five (5) acres. For the purposes of this Experimental Use Permit, applications shall not be made to fields that are within a ½ mile of each other, unless the combined acreage does not exceed the above restriction, or the application timelag between the two applications is at least 24 hours.
- The EUP Buffer Zone shall depend on the field-equivalent rate (Lbs MIDAS 50:50/Acre) and field size, as follows:
  - The application rate for this EUP program shall be limited to a maximum of 350 lbs product per treated acre. In bedded applications, the treated acreage differs from the field acreage because only the rows are treated. As row width and spacing will vary, a "field-equivalent" rate range is possible. For broadcast applications, "field acre", "treated acre" and "real estate acre" are equivalent terms.
  - To calculate the field rate equivalent to the actual raised bed application rate, multiply the treated rate by the appropriate Field Rate Modifier from the table below:

Field Rate Modifier Table

Row Spacing (inches)	Bed Width (inches)	Field Rate Modifier
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

For example, the field-equivalent rate for application using 72 inch

row spacing and 36 inch bed width is 300 lbs product /Acre x 0.50 = 150 lbs product /Acre.

- To determine the size of the buffer zone required for an EUP application, use the field-equivalent rate calculated above and the field acreage of the application, in the table below.

EUP Buffer Zone Table (feet) – field-equivalent rate*

Field size	Up to 120 lbs product /A	> 120 to 180 lbs product /A
Up to 5 acres	60	115
>5 to 10 acres	60	250
>10 to 20 acres	150	445

*: For broadcast applications on fields destined for ornamental and strawberry nursery crops (fields that this EUP limits to no larger than 2 acres per site), the buffer zone distance shall be fixed at 50 feet for 200 lbs of product, 115 feet for 250 lbs of product, 180 feet for 300 lbs of product, and 250 feet for 350 lbs of product. In California, for the single broadcast application onto 2.5 acres at a rate of up to 200 lbs of product per acre, the buffer zone distance shall be fixed at 115 feet.

PPE For Reentry During the Entry-Restricted Period:
Reentry within the treated area within the 48 hour restricted period is limited to inspection and repair of tarping material allowed by this labeling. Reentry within the EUP Buffer Zone adjacent to the treated area within the 48 hour restricted period is limited to tasks permitted under the WPS. The PPE required for these tasks are listed in the "Personal Protective Equipment" section of this label's PRECAUTIONARY STATEMENTS.

Precautions for Usage Prior to, During and After All Soil Applications:

Prior to Fumigant Applications:

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs:
  - The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing the following:
    - Skull and crossbones symbol.
    - "DANGER/PELIGRO".
    - "Area under fumigation. DO NOT ENTER/NO ENTRE."
    - "Iodomethane and Chloropicrin Fumigants in Use."
    - The date and time of fumigation,
    - Name of this product, and
    - The name, address, and telephone number of the applicator.
- Comply with all local ordinances and regulations.

- Do not apply this product in the presence of ground fog, inversion layers or when the potential for an inversion layer is likely to occur as this may result in product drift outside the treated area. A smoke generator can be used to indicate the presence of an inversion layer if the smoke column does not rise in a vertical pattern. Consult the local weather forecast in the surrounding region for reports of expected inversion layers during application and within the 24 hour period following applications of MIDAS 50:50.
- Never fumigate alone. A minimum of two trained people must be present during handling and application of soil fumigants.
- Certified applicators are responsible for providing all other workers information about precautions and procedures in the safe handling, worker protection and application of MIDAS for soil fumigation. Application tasks include, but are not limited to the tractor driver, co-pilot, tarp dispenser, shoveler, and cross-ditcher.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers positioned "upwind" from the container and where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."
- Soil preparation of the treatment area should be reasonably free of trash and in good tilth prior to soil treatment.
- Do not apply to wet or cold soils (<55°F at a depth of 8 inches).

During All Fumigant Applications:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following All Fumigant Applications:

- Keep all pets, livestock and other domestic animals out of the treated areas until after the tarpaulin has been removed.
- Remove the plastic tarps with a minimum of two trained people present during the operation.
- Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm at the edge of the treated area and no sooner than 48 hours following application. Signs must remain legible during entire posting period.
- To determine whether aeration is complete, each fumigated site must be tested and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site.
- Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Spill and Leak Procedures:

- Cease all operations if any leak develops in the fumigation system.
- Evacuate Evacuate everyone from the immediate areas of the spill or leak.
- Approach the area from the upwind side. Work upwind, if possible.
- For entry into the area to correct the problem, trained personnel must wear all personal protective equipment required by this label, including either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TS-19C) OR (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Only correctly trained and PPE-equipment handlers are permitted to enter. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm.
- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility.
- Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center (800-424-8802).

General Information and Instructions

This fumigant is a highly hazardous material. It is a restricted use pesticide that must only be used by or under the direct supervision of individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required air-purifying respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

SOIL BORNE PESTS CONTROLLED: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases such as those caused by Phytophthora, Pythium, Fusarium, Verticillium and Rhizoctonia. Soil Fumigation using MIDAS 50:50 must be conducted according to directions and conditions of use described in this label. Application of this product will control only those pests present in the soil at time of soil treatment. It is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease); avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

SOIL PREPARATION: Prior to the application of soil fumigants, the ground must be sufficiently moist to allow seeds to swell (imbibe) in preparation for germination. The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment with soil fumigants.

FIELD FUMIGATION: Apply MIDAS 50:50 by shank fumigation or drip application. For shank fumigation use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed, utilizing a mechanical tarp layer, with a gas-tight plastic tarpaulin immediately following the chisel, as detailed below under "Iodomethane Pre-Plant Field Fumigation Methods". Tarps must remain on the soil for at least 5 days prior to cutting and removal.

PLANTING INTERVAL FOR ALL APPLICATIONS:

- Do not plant for at least 10 days after application of the fumigant. A longer period before planting is necessary when using highly retentive film (see tables below) and may be necessary if the soil is wet or cold.
- If tarpaulins are removed, planting can occur 10 days after application. This period includes the minimum 5 days of sealed fumigation prior to tarp cutting plus the minimum of 24 hours of aeration after the tarpaulins have been cut before they are removed.
- If tarpaulins are not to be removed before planting, then planting shall not occur before either:
    - At least 12 days after application, including at least 24 hours after holes have been cut in the tarpaulin to allow for aeration; or
    - At least 14 days after application. In this case, tarpaulins do not need to be cut or aerated prior to planting. However, if this option is chosen, the chloropicrin air concentration below the tarpaulin must be less than 0.1 parts per million before planting begins.

To minimize the potential for crop injury, allow the fumigant to dissipate completely before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin used in MIDAS 50:50 is detectable.

TARPAULIN CUTTING AND REMOVAL:

- Following the completion of the application of MIDAS 50:50 (including, when applicable, the formation of cross ditches), the tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.
    - *If the tarpaulin is removed from the field, removal shall begin no sooner* than 24 hours after tarpaulin cutting has been completed, a task which cannot occur until a minimum of 5 days after application, as stated above.

CROP ROTATION RESTRICTIONS

Crops other than strawberry, tomatoes, peppers require a 4 month plant back rotation restriction. Strawberries, fresh market tomatoes and peppers can be planted into treated soil as soon as crop safety can be assured and no sooner than 10 days after treatment. See Planting Interval for specific instructions.

Application by Bed Shank fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below. Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

BEDDED PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Application by Broadcast or Flat fumigation: Use dosage rates and planting intervals as indicated in the Broadcast Pre-Plant Soil Fumigation Table below. Broadcast or Flat fumigation shall be restricted to field-grown ornamentals and strawberry nurseries and field sizes shall not exceed two (2) acres. Refer to the "AGRICULTURAL USE REQUIREMENTS" box for additional restrictions.

BROADCAST PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Acre	Time Between Application and Planting*
Field-Grown Ornamentals	300 lbs / Acre (18.9 gal / Acre)	10 – 14 days 14 - 21 days when using highly retentive films**
Strawberry Nursery	350 lbs /Acre (22 gal/Acre)	10 – 14 days

* If odors of fumigant persist beyond the two-week period you may disc, plow or chisel the soil to help aeration in a flat fume (broadcast) fumigation operation. An air-purifying respirator shall be worn during these activities if the airborne concentration of chloropicrin is determined to be 0.1 ppm or greater when measured with a direct reading device such as a Kitagawa tube. Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

**Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

IODOMETHANE PRE-PLANT FIELD FUMIGATION METHODS:
During the Experimental Use Permit program, fumigations with MIDAS 50:50 shall be performed in accordance with the following application techniques.

Tarpaulin/Bedded

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
  - Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less typically performed with a multiple shank applicator.
- The tarpaulin shall not be cut for at least 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Tarpaulin/Broadcast (ornamental and strawberry nursery crops only)

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface. The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Application by Raised Bed Drip Fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below and follow the instructions provided below under Drip Fumigation (Chemigation). Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

Bedded Pre-Plant Drip Fumigation Table

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days 14 - 21 days when using highly retentive films***

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

** Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

***Use of highly retentive films (e.g. VIF and approved Metallic) will require a rate reduction of up to 40-50% of the maximum use rate. Contact your Arysta LifeScience representative for rate recommendations.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

DRIP FUMIGATION (CHEMIGATION):

Apply this product only through buried drip tape or equivalent irrigation system. Do not use this product through any other type of irrigation system. As required for all applications of this product, treated areas must be covered with a plastic tarpaulin for a minimum of 5 days following application (see Precautions for Usage Prior to, During, and After All Soil Application section).

General Instructions for Drip Fumigation:

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- Only a person knowledgeable of the chemigation system and responsible for its operation, or persons under their direct supervision shall operate the system and make the necessary adjustments, should the need arise.
- Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- "Public water system" means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regulatory serves an average of at least 25 individuals daily at least 60 days out of the year.

- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed, automatic valve located on the intake side of the injection pump or inert gas pressurized cylinder and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) or an inert gas pressurized cylinder effectively designed and constructed of materials that are compatible with a system interlock.

Application by Drip Fumigation:

- Use dosage rates and planting interval times as indicated in the Pre-Plant Fumigation Table (above). Drip applications may be made at the broadcast rates but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.
- MIDAS 50:50 with emulsifying agent may be applied through buried drip tape. Use of a tarp seal is required for all applications of this product.
- The dilution rate for drip-line fumigation is 1,400 - 2000 ppm. One gallon of MIDAS 50:50 with emulsifying agent in 2650 gallons of water is equivalent to 1,000 ppm. MIDAS 50:50 with emulsifying agent must be metered into the water.
- Soil must be in good tilth and condition, free of clods and un-decomposed soil material.
- Use drip irrigation components made of brass, stainless steel, copper, nickel, polypropylene, polyethylene, Teflon, viton, rigid PVC, and EPDM. Rigid PVC must not be exposed to undiluted MIDAS 50:50 with emulsifying agent or more than 2000 ppm MIDAS 50:50 with emulsifying agent in the diluted form. Do not use aluminum, vinyl, plastic (other than polypropylene or polyethylene), zinc or alloys.
- In very sandy soils, apply MIDAS 50:50 with emulsifying agent when soil moisture conditions throughout the treatment zone are near field capacity. When necessary, apply a pre-treatment amount of water to wet the bed

and enhance even movement of the material through the soil profile at time of treatment.

- MIDAS 50:50 with emulsifying agent must be monitored as it enters the irrigation system and must pass through a static mixer, coarse filter, or fine strainer or equivalent devices to insure proper mixing before it is distributed through the irrigation system. Do not allow treatment solution to accumulate on the soil surface. Do not allow treatment solution to pond, puddle or run-off. If run-off occurs, discontinue the application immediately and cover the contaminated soil area with clean soil to absorb the material.
- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent back flow contamination of the water source.
- The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the chemical supply or injection pump.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Pump types must be suitable for the injection of corrosive materials and capable of being fitted with a system interlock. Injection systems must use a metering pump, such as a positive displacement or diaphragm pump, venturi system or a pressure safe cylinder containing MIDAS 50:50 with emulsifying agent equipped with a metering valve and flow meter.
- Following application, continue to apply irrigation water to rinse the irrigation system of any MIDAS 50:50 with emulsifying agent. Make sure any rigid dead end or low spots are drained or flushed completely. DO NOT ALLOW MIDAS 50:50 WITH EMULSIFYING AGENT TO REMAIN IN THE IRRIGATION SYSTEM. Leave the soil undisturbed for at least 10 days after fumigation, and then proceed with normal agricultural practices for crop management activities.

STORAGE, HANDLING AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.

Handling: Product cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be

firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. When cylinder is not in use, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and must be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers should never be refilled by the consumer or used for any other product or purpose.

CONDITIONS OF SALE

1. Arysta LifeScience North America Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use.
2. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arysta LifeScience North America. **ARYSTA LIFESCIENCE NORTH AMERICA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. TO THE EXTENT ALLOWED BY LAW, SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. ARYSTA LIFESCIENCE NORTH AMERICA DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**
3. Critical and unforeseeable factors beyond Arysta LifeScience North America's control (including but not limited to weather conditions, crop conditions, presence of other materials, use or application of the product in a manner inconsistent with its labeling, or other influencing factors in the

use of this product) prevent Arysta LifeScience North America from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which the product is applied, and lack of complete control Except as stated in 1 above, to the extent allowed by law, Buyer and User acknowledge and assume all risks and liabilities resulting from handling, storage, and use of this product.

MIDAS is a trademark of Arysta LifeScience North America Corporation

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

DATE: July 20, 2006

SUBJECT: **Iodomethane:** Health Effects Division (HED) Evaluation Of The Proposed Experimental Use Permit. PC Code: 000011, DP Barcode: D330482

FROM: Jeffrey L. Dawson, Chemist/Risk Assessor
Elizabeth Mendez, Ph.D., Toxicologist/Risk Assessor
Michael Metzger, Branch Chief
Reregistration Branch 1
Health Effects Division (7509C)

TO: Mary Waller, Product Manager
Registration Division

The recently submitted application for an experimental use permit (EUP) for iodomethane has been reviewed by the Health Effects Division. This review only addresses elements of the proposal related to human health risks (i.e., bystander and occupational exposures). This review does not address the validity of the proposed testing program related to addressing issues such as the efficacy of iodomethane or the economics of using iodomethane as a possible replacement for methyl bromide. Several documents were considered in this review that can be identified by the following:

- Correspondence From Laurent Mezin (Regulatory Manager For Iodomethane, Arysta LifeScience North America Corporation) to Mary Waller (EPA, Registration Division, Product Manager 21) dated 4/24/2006.

- *Documentation Supporting Application For Experimental Use Permit (EUP) Iodomethane*, Submitted By Arysta LifeScience North America, Project Number ARV2006EUP, dated 4/24/2006.

- Updated Iodomethane labeling forwarded by Tamue Gibson, via email, to the Health Effects Division on 7/5/2006.

- Forwarded email correspondence on 7/12/2006 from Rick Tinsworth (Exponent Corporation, representing Arysta LifeScience) to Mary Waller (EPA, Registration Division, Product Manager 21) providing clarification on questions related to the design of the EUP research program.

The specific objectives of the research program, according to the 4/24/2006 correspondence from Laurent Mezin and the 7/12/2006 email correspondence from Rick Tinsworth, are threefold. These objectives, summarized based on the 7/12/2006 email, include:

- **Objective 1:** To deliver data that supports the technical feasibility of MIDAS as a methyl bromide replacement based on factors such as yield, compatibility with current application equipment, and efficacy with VIF or metallic films.

- **Objective 2:** To determine the economic feasibility of MIDAS compared to methyl bromide based on relative production costs and marketable yields and grower response.

- **Objective 3:** Based on the grower acceptance of both technical and economic feasibility the EUP program results will inform the risk benefit analysis.

The proposed testing program is summarized in Section G (page 41 of the 4/24/06 supporting document and in the correspondence from Laurent Mezin). The program is to be completed in the period from August 2006 to August 2007. Treatment to as much as 1000 acres in up to 275 individual field trials is requested in plots that range from 1 to 20 acres. The program is to be conducted in 7 different states that include Florida, Georgia, Michigan, North Carolina, South Carolina, Tennessee, and Virginia. The most acreage and number of trials is proposed for Florida (i.e., 600 acres and 150 trials). Tennessee has the lowest proposed values (i.e., 20 acres and 2 trials). The intent of the treatments in the trials is to prepare fields for strawberry, tomato, pepper, or field-grown ornamental production. The formulation to be used is MIDAS 50:50 which contains equal amounts of iodomethane and chloropicrin. Allowable application methods are all shank injection and result in tarped raised beds or tarped flat fume fumigation. The proposed maximum application rate is 300 pounds of product/treated acre which equates to a flat fume application rate of 150 pounds of iodomethane/treated acre. For raised bed applications, this rate is adjusted to account for the amount of treated area within each total cropped acre. The adjustment factors account for row spacing and raised bed width which range from 36 to 58 percent of the total area. Using these adjustment factors iodomethane application rates, based on total cropped acreage, range from approximately 60 to 90 pounds/acre when raised bed application methods are used.

The risk assessment for iodomethane (D325080; January 5, 2006; Authors: Mendez & Dawson) addresses the potential health risks associated with the uses proposed in the monitoring program. It should be noted that in the EUP package a number of studies were cited that are the same as the ones upon which the risk assessment is based. It is also important to note that the risk assessment evaluated many field situations based on different application methods/emission profiles, application rates, and field sizes, many of which differ or exceed the field situations allowed by the proposed label (e.g., the risk assessment addresses 40 acre fields and the EUP label only allows applications to up to 20 acre fields).

The proposed label provides the worker protection standard language pertaining to requirements for emergency/spill situations. It also specifies requirements for handler personal protective equipment and buffer zones to protect those who may be present in adjacent areas after an application event. The personal protective equipment (PPE) specified on the label includes:

- Loose fitting or well ventilated long-sleeved shirt and long pants;

- Shoes & socks;

- A respirator with a 3M Brand No. 60928 cartridge filter or equivalent (MSHA/NIOSH approved number prefix TC-23C);

- Drivers may use a closed cab equipped with an approved air fan dilution system or use of a tractor mounted iodomethane/chloropicrin adsorptive vapor filter in lieu of a personal respiratory protection device. This iodomethane/chloropicrin filter must be installed and changed according to the manufacturer's specifications.

- When handling the product (e.g., the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do not wear goggles.

- Specifications for engineering controls were also specified (e.g., hose fittings, tanks, site gauges, mechanical transfer systems, shut-off devices, and pressure limits).

The label requirements for the use of a respirator were evaluated based on the results in the risk assessment for occupational handlers (D325080, Table 12, page 50). A requirement for use of a respirator is consistent with the results for handler activities. Additionally, post-application activities (e.g., hole puncher, planter, and tarp removers) were also evaluated. The risk assessment indicates these tasks do not require the use of a respirator which is consistent with the proposed label. The Agency conducted a team review of the proposed EUP program and notes that on page 11 of 13 in the section entitled *Application by Broadcast or Flat Fumigation* there is a footnote to the table that allows treated fields to be plowed or disked to "help aeration" if there are situations where "odors of a fumigant persist" for two weeks. It is recommended an air purifying respirator also be required when conducting these activities.

The proposed label establishes buffer zones for raised bed applications intended to define exclusion areas in order to adequately protect bystanders who may live or otherwise spend time in areas adjacent to treated fields. No buffer zones are established in the proposed label for flat-fume applications. The development of a buffer approach is consistent with the risk assessment (D325080). On the label, buffer distances for raised bed applications at the maximum rate (up to 180 lb MIDAS 50/50 which equates to 90 lb iodmethane) are specified for 3 different field sizes (see page 7 of 13, EUP Buffer Zone Table). These are summarized below:

- Up to 5 Acres at >120 to 180 lb MIDAS (60 to 90 lb iodomethane)/acre: 115 Feet

- >5 to 10 Acres at >120 to 180 lb MIDAS (60 to 90 lb iodomethane)/acre: 250 Feet

- >10 to 20 Acres at >120 to 180 lb MIDAS (60 to 90 lb iodomethane)/acre: 445 Feet

The label-specified buffer values were determined using the PERFUM model in combination with the emissions (i.e., Guadalupe Tarped Raised Bed study) and weather data (Ventura CA) which provide the longest buffer distances (see D325080 for more details). From the PERFUM analyses, results were selected based on outputs that represent maximum distance buffers at a 90 lb iodomethane/cropped acre application rate at the 95th percentile of exposure. It should be noted that two possible toxicological effects were also considered (i.e., fetal death, HEC = 4 ppm and nasal lesions, HEC = 2.9 ppm) and that the proposed buffer distances are based on the nasal lesions endpoint (see D325080 for more details). In the Agency's analysis (contained in D325080), predicted buffer distances were essentially identical to those included in the proposed label for the same inputs and selected output parameters (e.g., percentile of exposure). In fact, the only value that differed slightly was for the buffer up to 5 acre fields where the label specified 115 feet and the Agency estimate was 100 feet. Of course, if other inputs or output parameters were considered the proposed label would require modification (e.g., if a different percentile of exposure was specified).

A buffer zone was not established for flat fume fumigation events that could occur under the proposed label. Using similar inputs and output statistics, the Agency evaluated predicted buffer distances from the risk assessment for flat-fume fumigation events and recommends that a buffer zone of 50 feet be established and incorporated into the proposed label. [Note: It is much different from those described above since flat fume applications are limited to field grown ornamentals at a maximum treated area of 2 acres.]

The Agency conducted a team review of the proposed EUP program and notes that on page 6 of 13 in the section entitled *Prohibition of Entry Into Treated Areas Adjacent To Treated Fields (EUP Buffer Zones)* there is no requirement for posting warning signs on buffer zones as is established for the treated areas themselves. The Agency recommends that these be posted at intervals around the perimeter of any buffer zone that is established to ensure adequate notification of effected bystanders in addition to the required warning signs on the treated areas. The Agency also requires clarification of the language included in this section, especially "it is required that the supervisors of experimental work under this EUP prohibit persons from being present in areas adjacent to the treated field." It is not clear how this would be accomplished in a consistent manner that would assure the Agency of appropriate compliance with this requirement. Finally, it is recommended that the buffer zones be established for a period of 48 hours instead of the 24 hours specified in the label. This is because of the possible longer emissions profile for iodomethane through metalized films and VIF films that could occur because of the lower permeability associated with these materials as opposed to typical high density polyethylene films which are predominant in the industry and which were used to conduct all iodomethane field emissions research used in the risk assessment. Finally, the Agency is concerned about the possibility of multiple field trials being conducted in proximity to one another. The buffer zones are intended to adequately reduce risks from single application events. In order to prevent possible effects from additive application events the Agency requires that a separation zone of 1/2 mile be established between the outside perimeters of any buffer zones in a localized area during the 48 hour periods when the buffer zones are required to be in place.

In the section entitled Precautions For Usage Prior To, During, And After Soil Fumigation: Prior To Fumigation, it is recommended that "Comply with all local ordinances and regulations" be modified to "Comply with all applicable state and county ordinances and regulations."

Finally, the objectives of this program do not include generating additional monitoring data that will be quantitatively useful for adjusting or refining the human health risk assessment such as field volatility or meteorological data. However, it is possible that other factors in the risk assessment could be impacted based on the results of this program such as enhanced information pertaining to application rate reduction due to the use of VIF or metalized films during application. These are hypothesized to retain more iodomethane in the soil due to their lower permeability which theoretically would reduce the amounts needed to achieve acceptable efficacy. It is recommended, however, that additional monitoring data be developed in order to quantify emissions at the lower application rates anticipated when using metalized films or VIF films. Specifically, the Agency believes the following studies would provide useful information for refining the risk assessment in a quantitative manner:

- Metalized film tarped raised bed application in Florida;
- VIF film tarped raised bed application in Florida;
- Metalized film tarped raised bed application in Michigan; and
- VIF film tarped raised bed application in Michigan.

It is recommended that the Arysta protocol be used for collecting these data from that latest iodomethane field volatility/emissions work with a couple of modifications that include:

- Use of a sonic anemometer to reduce the impact of calm periods; and
- Addition of samplers to aerodynamic flux calculations.

[Note: Michigan and Florida were selected because they represent likely high use areas for iodomethane, different cultural practices, and different soil types and weather conditions which may impact emissions profiles.]

Arysta LifeScience

Samuel / File in jacket for EUP

July 19, 2006

Office of Pesticide Programs
Document Processing Desk (APPL)
U.S. Environmental Protection Agency
Room S-4900
One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Attn: Mary Waller
Product Manager 21
(703) 308 9354

Subject: Iodomethane (~~EPA File No. 66330-UU~~)
MIDAS 50:50 (~~EPA File No. 66330~~-LT)
Updated label for Experimental Use Permit (EUP)

Dear Ms. Waller:

Included with this cover letter is an updated label for the Iodomethane (MIDAS) Experimental Use Permit (EUP) initially submitted to the agency on April 24, 2006. This label replaces the last label submitted to the Agency, dated July 07, 2006 and addresses the questions recently raised by the Agency.

The following changes have been made:

1. **Warning Signs are now posted at the edge of the EUP Buffer Zones.**
The previous label required posting of warnings signs at entry points around the edge of the treated field for the 48 hours following application. The new label now requires those posting signs to be at the entry points around the edge of the EUP Buffer zone for the 48 hours following application.

NOTE: The proposed use of warning signs at the edges of the EUP Buffer Zone is more conservative than the traditional use of these signs at the edge of the treated field and are more restrictive because these signs are required for the longest reentry period, 48 hours, that would normally only apply to the treated field, not the whole EUP Buffer Zone. Use of this more conservative placement of the warning sign at the further restrictive distance will make it easier for both the enforcement agencies to verify compliance and for workers to maintain their compliance with the restricted zones during this limited EUP program.

2. **Reentry Tasks allowed in the EUP Buffer Zones follow WPS guidelines.**
Tasks are very limited on treated field. The previous label limited reentry tasks allowed within **both** the treated field and the EUP Buffer Zones to "inspection and repair of tarping material". The new label maintains these same restrictions on the treated field but allows other, WPS approved tasks to be performed within the EUP Buffer Zone. Both the old and new label require use of appropriate PPE during these reentry tasks.

Arysta LifeScience North America Corporation
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Arysta LifeScience

NOTE: The revised language for reentry tasks recognizes that reentry should continue to be heavily limited within treated area during the first 48 hours following application whereas more tasks should be allowed in areas adjacent to the treated fields. The proposed language clarifies this difference while maintaining that appropriate PPE is required for all of these reentry tasks, regardless of their location.

3. **Clarification on EUP Buffer Zone rules.** The label also shows modifications to the EUP label that were submitted to the EPA on July 10, 2006. These modifications were the result of comments made by both the EPA and Florida as of that date. These modifications include a) Clarifying how the EUP Buffer Zone is measured from the edge of the treated field, and b) clarifying which tasks are prohibited within the EUP Buffer Zone.

In support of this submission, the following are attached:

1. A copy of the updated label with recent changes highlighted; and
2. A clean copy of the same label, with all changes integrated into the text.

Please contact me at 415-279-6031 if you have any questions or need further information.

Sincerely,

Laurent Mézin
Consulting Regulatory Manager, Iodomethane
Registration and Regulatory Affairs
Arysta LifeScience North America Corporation
(415) 279 6031

FOR EXPERIMENTAL USE ONLY

Not for sale to any person other than a participant or cooperator of the EPA-approved experimental use.

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS™ 50:50

For Experimental Pre-Plant Fumigations of Fields Intended for Commercial Production of Various Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	50.00%
Chloropicrin	50.00%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.95 pounds Iodomethane and 7.95 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille. (If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice. •

If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER For 24-hour chemical emergency (spill, leak, fire or accident) assistance: Call CHEMTREC at 1-800-424-9300. For 24-hour emergency medical assistance: Call 1-800-228-5635 Ext. 174	
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.	

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA EUP No.: 66330 - ____ Net Contents _____
EPA Est. No.: ___ - __

Arysta LifeScience North America
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Wear protective face shield, loose fitting or well ventilated long-sleeved shirt, long pants, and shoes plus socks. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. If clothing or absorbent materials (e.g. leather) have been drenched or heavily contaminated with this product, discard these items - do not reuse them. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is

evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading devices, such as Kitigawa tubes, certified for chloropicrin. Persons involved in the Experimental Use application of MIDAS 50:50 or in reentry into treated fields must wear an air-purifying respirator. In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- A respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- Drivers may use a closed cab equipped with an approved air fan dilution system or use of a tractor mounted iodomethane / chloropicrin adsorptive vapor filter in lieu of a personal respiratory protection device. This iodomethane/chloropicrin filter must be installed and changed according to the manufacturer's specifications
- When handling the product (e.g. the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.

USER SAFETY REQUIREMENTS

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning / maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash thoroughly and put on clean clothing. If clothing is drenched or heavily contaminated with this product, discard clothing or absorbent materials (e.g. leather) - do not reuse them.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NDPES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

STORAGE, HANDLING AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Storage: Store in a dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area.

Handling: Product cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and should be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers should never be refilled by the consumer or used for any other product or purpose.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH APPROVED EXPERIMENTAL USE PROGRAM.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only certified applicators and workers trained in the proper handling, worker protection and application of MIDAS soil fumigant may be in the area during application. All such personnel must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification,

and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions:
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person - other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling – is PROHIBITED from the start of the application until 48 hours after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Non-handler entry is prohibited while tarps are being removed.
Entry Restrictions into the EUP Buffer Zones are defined in the Section "Prohibition of Entry Into Areas Adjacent to Treated Fields (EUP Buffer Zones)" below.

Notification at Entrances to Treated Areas:
Notify all workers of the fumigation verbally and by posting warning signs at entrances to EUP Buffer Zones (EUP Buffer Zones are defined in the next section). The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) Name of this product, and
(6) Name, address, and telephone number of the applicator.

Post these fumigant warning signs instead of the WPS signs for these applications, but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal. These fumigant warning signs shall be posted for no less than 48 hours.

Prohibition of Entry Into Areas Adjacent to Treated Fields (EUP Buffer Zones):

- From the start of the application until 24 hours after the application of MIDAS 50:50 has ended, it is required that the supervisors of experimental work under this EUP prohibit persons from being present in areas adjacent to the treated field. These adjacent areas are referred to as the EUP Buffer Zones.

- An EUP Buffer zone shall extend from the edge of the treated area in all directions, to a distance calculated per the directions below. The minimum EUP Buffer Zone distance shall be 60 feet from the edge of the treated area.

- Any activity which results in a person being present within the EUP Buffer Zone during the 24 hour period following application is prohibited. Correctly trained and equipped handlers performing a task that is permitted by this labeling may enter inside the Buffer Zone. Examples of activities that are prohibited are work or recreation within a Buffer Zone, or occupation of structures that are within a Buffer

Zone while the Buffer Zone is in effect. Examples of activities that are not prohibited are driving past the treated field or occupying a structure that is not within the Buffer Zone.

For this Experimental Use of MIDAS 50:50, the following restrictions apply:

- The areas treated with MIDAS 50:50 shall not exceed 20 contiguous field acres for bedded fumigation applications. For ornamental crops only, broadcast or flat fumigation applications will be allowed on fields of up to two (2) acres. For the purposes of this Experimental Use Permit, applications shall not be made to contiguous fields, unless the combined acreage does not exceed the above restriction.
- The EUP Buffer Zone shall depend on the field-equivalent rate (Lbs MIDAS 50:50/Acres) and field size, as follows:
  - The application rate for this EUP program shall be limited to 300 lbs product per treated acre. In bedded applications, the treated acreage differs from the field acreage because only the rows are treated. As row width and spacing will vary, a "field-equivalent" rate range is possible. For broadcast applications, field acres are equivalent to treated acres.
  - To calculate the field rate equivalent to the actual raised bed application rate, multiply the treated rate (300 lbs/A) by the appropriate Field Rate Modifier from the table below:

Field Rate Modifier Table

Row Spacing (inches)	Bed Width (inches)	Field Rate Modifier
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

For example, the field-equivalent rate for application using 72 inch row spacing and 36 inch bed width is 300 lbs/A x 0.50 = 150 lbs/A.

  - To determine the size of the buffer zone required for an EUP application, use the field-equivalent rate calculated above and the field acreage of the application, in the table below.

EUP Buffer Zone Table (feet) – field-equivalent rate

Field size	Up to 120 Lbs/A	> 120 to 180 Lbs/A
Up to 5 acres	60	115
>5 to 10 acres	60	250
>10 to 20 acres	150	445

PPE For Reentry During the Entry-Restricted Period:
Reentry within the treated area within the 48 hour restricted period is limited to inspection and repair of tarping material allowed by this labeling. Reentry within the EUP Buffer Zone adjacent to the treated area within the 24 hour restricted period is limited to tasks permitted under the WPS. The PPE required for these tasks are listed in the "Personal Protective Equipment" section of this label's PRECAUTIONARY STATEMENTS.

Precautions for Usage Prior to, During and After Soil Fumigation:

Prior to fumigation:

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs:
  - The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing the following:
    - Skull and crossbones symbol.
    - "DANGER/PELIGRO".
    - "Area under fumigation. DO NOT ENTER/NO ENTRE."
    - "Iodomethane and Chloropicrin Fumigants in Use."
    - The date and time of fumigation,
    - Name of this product, and
    - The name, address, and telephone number of the applicator.
- Comply with all local ordinances and regulations.
- Do not apply this product when there is an atmospheric inversion.
- Never fumigate alone. A minimum of two trained people must be present during handling and application of soil fumigants.
- Certified applicators are responsible for providing all other workers information about precautions and procedures in the safe handling, worker protection and application of MIDAS for soil fumigation.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers standing "upwind" from the container and where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."
- Soil preparation of the treatment area should be reasonably free of trash and in good tilth prior to soil treatment.

- Avoid applying to wet or cold soils (<55°F at a depth of 8 inches).

During Fumigation:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following Fumigation:

- Keep all pets, livestock and other domestic animals away from the treated areas until after the tarpaulin has been removed.
- Remove the plastic tarps with a minimum of two trained people present during the operation.
- Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm and no sooner than 48 hours following application. Signs must remain legible during entire posting period.
- To determine whether aeration is complete, each fumigated site should be determined and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site.
- Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Spill and Leak Procedures:

- Cease all operations if any leak develops in the fumigation system.
- Evacuate all people from the area to a safe distance upwind.
- For entry into the area to correct the problem, wear all personal protective equipment, including either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TS-19C) OR (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Approach the area from the upwind side.

Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center (800-424-8802).

General Information and Instructions

This fumigant is a highly hazardous material. It is a restricted use pesticide that must only be used by individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant

must be knowledgeable about the hazards and trained in the use of required respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

SOIL BORNE PESTS CONTROLLED: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases such as those caused by *Phytophthora, Pythium, Fusarium, Verticillium* and *Rhizoctonia.*
Soil Fumigation using MIDAS 50:50 must be conducted according to directions and conditions of use described in this label. Application of this product will control only those pests present in the soil at time of soil treatment. It is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease), avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

SOIL PREPARATION: Prior to the application of soil fumigants, the ground must be sufficiently moist to imbibe seeds for germination. The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment with soil fumigants.

FIELD FUMIGATION: Apply MIDAS 50:50 by shank fumigation. Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed, utilizing a mechanical tarp layer, with a gas-tight plastic tarpaulin immediately following the chisel, as detailed below under "Iodomethane Pre-Plant Field Fumigation Methods". Tarps should remain on the soil for at least 5 days prior to cutting and removal.

PLANTING INTERVAL FOR ALL APPLICATIONS:

- Do not plant for at least 10 days after application of the fumigant. A longer period before planting may be necessary if the soil is wet or cold.
- If tarpaulins are removed, planting can occur 10 days after application, including a minimum of 5 days prior to tarp cutting plus a minimum of 24 hours of aeration after the tarpaulins have been cut.
- If tarpaulins are not to be removed before planting, then planting shall not occur before either:
    - At least 12 days after application, including at least 24 hours after holes have been cut in the tarpaulin to allow for aeration; or
    - At least 14 days after application. In this case, tarpaulins do not need to be cut or aerated prior to planting. However, if this option is chosen, the chloropicrin air concentration below the tarpaulin must be less than 0.1 parts per million before planting begins.

To minimize the potential for crop injury, allow the fumigant to dissipate completely before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present

in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin used in MIDAS 50:50 is detectable.

TARPAULIN CUTTING AND REMOVAL:

- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.
    - If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.

CROP ROTATION RESTRICTIONS

Crops other than strawberry, tomatoes, peppers require a 4 month plant back rotation restriction. Strawberries, fresh market tomatoes and peppers can be planted into treated soil as soon as crop safety can be assured and no sooner than 10 days after treatment. See Planting Interval for specific instructions.

Application by Bed Shank fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below. Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

BEDDED PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

**
Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Application by Broadcast or Flat fumigation: Use dosage rates and planting intervals as indicated in the Broadcast Pre-Plant Soil Fumigation Table below. Broadcast or Flat fumigation shall be restricted to field-grown ornamentals and field sizes shall not exceed two (2) acres.

BROADCAST PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Acre	Time Between Application and Planting*
Field-Grown Ornamentals	300 lbs / Acre (18.9 gal / Acre)	10 – 14 days

* If odors of fumigant persist beyond the two-week period you may disc, plow or chisel the soil to help aeration in a flat fume (broadcast) fumigation operation. Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

IODOMETHANE PRE-PLANT FIELD FUMIGATION METHODS:
During the Experimental Use Permit program, fumigations with MIDAS 50:50 shall be performed in accordance with the following application techniques.

Tarpaulin/Bedded

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
  - Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less, typically performed with a multiple shank applicator.
- The tarpaulin shall not be cut for at least 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Tarpaulin/Broadcast (ornamental crops only)

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface. The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil

just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.

- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

CONDITIONS OF SALE

1. Arysta LifeScience North America Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use.
2. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arysta LifeScience North America. **ARYSTA LIFESCIENCE NORTH AMERICA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. ARYSTA LIFESCIENCE NORTH AMERICA DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**
3. Critical and unforeseeable factors beyond Arysta LifeScience North America's control prevent Arysta LifeScience North America from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which the product is applied, lack of complete control, and damage caused by drift to other plants or crops. Such risks occur even though the product is reasonably fit for the use stated on the label and even though label directions are followed. Except as stated in 1 above, Buyer and User acknowledge and assume all risks and liabilities resulting from handling, storage, and use of this product.

MIDAS is a trademark of Arysta LifeScience North America Corporation

FOR EXPERIMENTAL USE ONLY

Not for sale to any person other than a participant or cooperator of the EPA-approved experimental use.

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

MIDAS™ 50:50

For Experimental Pre-Plant Fumigations of Fields Intended for Commercial Production of Various Crops and Field-Grown Ornamentals, for the Control of Soil-Borne Pests Including Weed Seeds, Nematodes, Insects, and Diseases.

ACTIVE INGREDIENTS:

Iodomethane	50.00%
Chloropicrin	50.00%
TOTAL:	100.00%

One gallon weighs 15.9 pounds (7.95 pounds Iodomethane and 7.95 pounds Chloropicrin).

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaille. (If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice. •

If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER For 24-hour chemical emergency (spill, leak, fire or accident) assistance: Call CHEMTREC at 1-800-424-9300. For 24-hour emergency medical assistance: Call 1-800-228-5635 Ext. 174	
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage. Symptoms of overexposure may include irritation to eyes, skin, and respiratory system, shortness of breath, nausea, vomiting, dizziness, ataxia, slurred speech, drowsiness, blurred vision, staggering gait and mental imbalance, with probable recovery after period of no exposure. Treatment is symptomatic.	

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA EUP No.: 66330 - ____ Net Contents _____
EPA Est. No.: ___ - __

Arysta LifeScience North America
15401 Weston Parkway, Suite 150
Cary, NC 27513

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Corrosive to skin. Causes skin burns. May be fatal if inhaled or swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Wear protective face shield, loose fitting or well ventilated long-sleeved shirt, long pants, and shoes plus socks. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. If clothing or absorbent materials (e.g. leather) have been drenched or heavily contaminated with this product, discard these items - do not reuse them. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

This product contains chloropicrin, a poisonous liquid or vapor. Inhalation of vapors may be fatal. Chloropicrin is readily identified by smell. Exposure to very low concentrations of vapor will cause irritation of eyes, nose and throat. Continued exposure after irritation is

evident or higher concentrations may cause painful irritation to the eyes or temporary blindness. Liquid will cause chemical burns to skin or eyes. Do not get on skin, in eyes, or on clothing. Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract and is a strong lachrymator (tear producing eye irritant). Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing severely painful eye irritation, hence will not be voluntarily tolerated. However, the effect may be so powerful that a person may become temporarily blinded and panic-stricken and that in turn may lead to accidents.

AIR CONCENTRATION LEVEL

Air concentrations of chloropicrin are measured with direct reading devices, such as Kitigawa tubes, certified for chloropicrin. Persons involved in the Experimental Use application of MIDAS 50:50 or in reentry into treated fields must wear an air-purifying respirator. In case of spills or leaks, additional respiratory protection must be worn as detailed under Spill and Leak Procedures.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Loose fitting or well ventilated long-sleeved shirt and long pants.
- Shoes plus socks.
- A respirator with a 3M Brand No. 60928 cartridge filter, or equivalent (MSHA/NIOSH approved number prefix TC-23C).
- Drivers may use a closed cab equipped with an approved air fan dilution system or use of a tractor mounted iodomethane / chloropicrin adsorptive vapor filter in lieu of a personal respiratory protection device. This iodomethane/chloropicrin filter must be installed and changed according to the manufacturer's specifications
- When handling the product (e.g. the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do NOT wear goggles.

ENGINEERING CONTROL REQUIREMENTS

MIDAS 50:50 must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid.

- All hoses, piping, and tanks used in connection with this product shall be of a type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move the product must not exceed the manufacturer's maximum pressure specifications.

USER SAFETY REQUIREMENTS

- Do not wear jewelry, gloves, goggles, tight clothing or any rubber protective clothing/boots that can trap iodomethane or chloropicrin vapors against your skin. Iodomethane and chloropicrin vapors can be trapped inside clothing and cause skin injury.
- Remove all clothing that comes in contact with liquid material at once.
- Aerate all affected clothing thoroughly prior to washing with hot water and detergent.
- Discard any clothing or absorbent materials (e.g. leather), that have been drenched or heavily contaminated with this product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning / maintaining protective eyewear and respirators.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside, then wash thoroughly and put on clean clothing. If clothing is drenched or heavily contaminated with this product, discard clothing or absorbent materials (e.g. leather) - do not reuse them.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NDPES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat, open flames, or sparking electrical equipment. Do not use application devices containing natural rubber, aluminum, magnesium or their alloys.

STORAGE, HANDLING AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Storage: Store in a dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area.

Handling: Product cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law.

Return of Containers: This pesticide container, whether full or partially used, is the property of the manufacturer or distributor where it was purchased and should be returned to the distributor of origin. Do not ship containers without safety caps or valve protection bonnets. Containers should never be refilled by the consumer or used for any other product or purpose.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH APPROVED EXPERIMENTAL USE PROGRAM.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only certified applicators and workers trained in the proper handling, worker protection and application of MIDAS soil fumigant may be in the area during application. All such personnel must have appropriate protective equipment, as described in the PERSONAL PROTECTIVE EQUIPMENT section. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of

agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Entry Restrictions:
Entry into the treated area (including early entry that would otherwise be permitted under the WPS) by any person - other than a correctly trained and equipped handler who is performing a task that is permitted by this labeling – is PROHIBITED from the start of the application until 48 hours after application and the air concentration of chloropicrin is measured to be less than 0.1 ppm. Non-handler entry is prohibited while tarps are being removed.
Entry Restrictions into the EUP Buffer Zones are defined in the Section "Prohibition of Entry Into Areas Adjacent to Treated Fields (EUP Buffer Zones)" below.

Notification at Entrances to Treated Areas:
Notify all workers of the fumigation verbally and by posting warning signs at entrances to EUP Buffer Zones ~~treated areas~~(EUP Buffer Zones are defined in the next section). The signs must bear the skull and crossbones symbol and state:

(1) "DANGER/PELIGRO"
(2) "Areas under fumigation, DO NOT ENTER/NO ENTRE"
(3) Iodomethane and Chloropicrin Fumigants In Use
(4) Date and time of fumigation
(5) Name of this product, and
(6) Name, address, and telephone number of the applicator.

Post these fumigant warning signs instead of the WPS signs for these applications, but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal. These fumigant warning signs shall be posted for no less than 48 hours.

Prohibition of Entry Into Areas Adjacent to Treated Fields (EUP Buffer Zones):

- From the start of the application until 24 hours after the application of MIDAS 50:50 has ended, it is required that the supervisors of experimental work under this EUP prohibit persons from being present in areas adjacent to the treated field. These adjacent areas are referred to as the EUP Buffer Zones.

- An EUP Buffer zone shall extend from the edge of the treated area in all directions, to a distance calculated per the directions below. The minimum EUP Buffer Zone distance shall be 60 feet from the edge of the treated area.

- Any activity which results in a person being present within the EUP Buffer Zone during the 24 hour period following application is prohibited. Correctly trained and equipped handlers performing a task that is permitted by this labeling may enter inside the Buffer Zone. Examples of activities that are prohibited are work or

recreation within a Buffer Zone, or occupation of structures that are within a Buffer Zone while the Buffer Zone is in effect. Examples of activities that are not prohibited are driving past the treated field or occupying a structure that is not within the Buffer Zone.

For this Experimental Use of MIDAS 50:50, the following restrictions apply:

- The areas treated with MIDAS 50:50 shall not exceed 20 contiguous field acres for bedded fumigation applications. For ornamental crops only, broadcast or flat fumigation applications will be allowed on fields of up to two (2) acres. For the purposes of this Experimental Use Permit, applications shall not be made to contiguous fields, unless the combined acreage does not exceed the above restriction.
- The EUP Buffer Zone shall depend on the field-equivalent rate (Lbs MIDAS 50:50/Acres) and field size, as follows:
  - The application rate for this EUP program shall be limited to 300 lbs product per treated acre. In bedded applications, the treated acreage differs from the field acreage because only the rows are treated. As row width and spacing will vary, a "field-equivalent" rate range is possible. For broadcast applications, field acres are equivalent to treated acres.
  - To calculate the field rate equivalent to the actual raised bed application rate, multiply the treated rate (300 lbs/A) by the appropriate Field Rate Modifier from the table below:

Field Rate Modifier Table

Row Spacing (inches)	Bed Width (inches)	Field Rate Modifier
72	40	0.55
72	36	0.50
72	32	0.44
72	30	0.42
72	28	0.39
66	32	0.48
66	30	0.45
66	28	0.42
66	24	0.36
60	30	0.50
60	28	0.47
48	28	0.58

For example, the field-equivalent rate for application using 72 inch row spacing and 36 inch bed width is 300 lbs/A x 0.50 = 150 lbs/A.

  - To determine the size of the buffer zone required for an EUP application, use the field-equivalent rate calculated above and the field acreage of the application, in the table below.

EUP Buffer Zone Table (feet) – field-equivalent rate

Field size	Up to 120 Lbs/A	> 120 to 180 Lbs/A
Up to 5 acres	60	115
>5 to 10 acres	60	250
>10 to 20 acres	150	445

PPE For Reentry During the Entry-Restricted Period:
Reentry within the treated area ~~or within the EUP Buffer Zone~~ within the 48 hour restricted period~~s~~ is limited to inspection and repair of tarping material allowed by this labeling. Reentry within the EUP Buffer Zone adjacent to the treated area within the 24 hour restricted period is limited to tasks permitted under the WPS. The PPE required for these tasks are listed in the "Personal Protective Equipment" section of this label's PRECAUTIONARY STATEMENTS.

Precautions for Usage Prior to, During and After Soil Fumigation:

Prior to fumigation:

- Follow all local government instructions for posting of treated areas and post all treated areas with warning signs:
  - The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing the following:
    - Skull and crossbones symbol.
    - "DANGER/PELIGRO".
    - "Area under fumigation. DO NOT ENTER/NO ENTRE."
    - "Iodomethane and Chloropicrin Fumigants in Use."
    - The date and time of fumigation,
    - Name of this product, and
    - The name, address, and telephone number of the applicator.
- Comply with all local ordinances and regulations.
- Do not apply this product when there is an atmospheric inversion.
- Never fumigate alone. A minimum of two trained people must be present during handling and application of soil fumigants.
- Certified applicators are responsible for providing all other workers information about precautions and procedures in the safe handling, worker protection and application of MIDAS for soil fumigation.
- Additional instructions must be made available to workers in the mechanical operation of the tractor and how to safely work with the operator while fumigating.
- Always handle this product in the open, with all workers standing "upwind" from the container and where there is adequate ventilation.
- Check the fumigation system for leaks or worn out equipment prior to soil injection.
- When fumigating from a tractor, it is required that 5 gallons of water be carried on the tractor and readily available for rinsing and cleaning purposes. An additional 5 gallons of water must be available in the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."

- Soil preparation of the treatment area should be reasonably free of trash and in good tilth prior to soil treatment.
- Avoid applying to wet or cold soils (<55°F at a depth of 8 inches).

During Fumigation:

- Immediately cover treated areas with a plastic tarpaulin for a minimum of 5 days.
- Allow time for complete voiding of material in the buried shanks following closure of the shutoff valve and before removing shanks from the soil.
- In the event that trash is pulled up with the shanks after completing a treatment pass, the trash must be covered with plastic film and the edges of the film buried under at least 4 inches of compacted soil before making the next pass through the field.
- Do not change cylinders when the fumigant system is under pressure. Change cylinders with all cylinder valves in the off position.

Following Fumigation:

- Keep all pets, livestock and other domestic animals away from the treated areas until after the tarpaulin has been removed.
- Remove the plastic tarps with a minimum of two trained people present during the operation.
- Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration of chloropicrin is measured to be less than 0.1 ppm and no sooner than 48 hours following application. Signs must remain legible during entire posting period.
- To determine whether aeration is complete, each fumigated site should be determined and shown to contain less than 0.1 ppm chloropicrin in the air space around the treated site.
- Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Spill and Leak Procedures:

- Cease all operations if any leak develops in the fumigation system.
- Evacuate all people from the area to a safe distance upwind.
- For entry into the area to correct the problem, wear all personal protective equipment, including either (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TS-19C) OR (b) a self-contained breathing apparatus (SCBA)(MSHA/NIOSH approval number prefix TC-13F).
- Approach the area from the upwind side.

Contaminated soil, water and other cleanup debris may be hazardous waste. Report any spill that exceeds 200 lbs (12.6 gallons of product) to the National Response Center (800-424-8802).

General Information and Instructions

This fumigant is a highly hazardous material. It is a restricted use pesticide that must only be used by individuals trained and certified in its proper use. Before using, read the entire label and follow all use directions and precautions. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of required respirator equipment and detector devices, emergency procedures and proper use of the fumigant.

SOIL BORNE PESTS CONTROLLED: MIDAS 50:50 controls soil-borne pests including nematodes, insects, weed seeds, and diseases such as those caused by *Phytophthora, Pythium, Fusarium, Verticillium* and *Rhizoctonia.*
Soil Fumigation using MIDAS 50:50 must be conducted according to directions and conditions of use described in this label. Application of this product will control only those pests present in the soil at time of soil treatment. It is not to be used as a preventative treatment for pests that may be introduced after the fumigant has been applied and/or tarps removed. To reduce the potential for the re-introduction of pests (nematodes, weed seed and disease), avoid the use of irrigation water, transplants or equipment that could carry pests into the planting area. Avoid moving infested soil back into the treated area through cultivation or other means.

SOIL PREPARATION: Prior to the application of soil fumigants, the ground must be sufficiently moist to imbibe seeds for germination. The soil should be worked to the depth that is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and allowed enough time to decompose prior to treatment with soil fumigants.

FIELD FUMIGATION: Apply MIDAS 50:50 by shank fumigation. Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed, utilizing a mechanical tarp layer, with a gas-tight plastic tarpaulin immediately following the chisel, as detailed below under "Iodomethane Pre-Plant Field Fumigation Methods". Tarps should remain on the soil for at least 5 days prior to cutting and removal.

PLANTING INTERVAL FOR ALL APPLICATIONS:

- Do not plant for at least 10 days after application of the fumigant. A longer period before planting may be necessary if the soil is wet or cold.
- If tarpaulins are removed, planting can occur 10 days after application, including a minimum of 5 days prior to tarp cutting plus a minimum of 24 hours of aeration after the tarpaulins have been cut.
- If tarpaulins are not to be removed before planting, then planting shall not occur before either:
    - At least 12 days after application, including at least 24 hours after holes have been cut in the tarpaulin to allow for aeration; or
    - At least 14 days after application. In this case, tarpaulins do not need to be cut or aerated prior to planting. However, if this option is chosen, the chloropicrin air concentration below the tarpaulin must be less than 0.1 parts per million before planting begins.

To minimize the potential for crop injury, allow the fumigant to dissipate completely before planting a crop. Seeds may be used as a bioassay to determine if MIDAS 50:50 is present in the soil at concentrations sufficient to cause plant injury. DO NOT PLANT if the odor of the chloropicrin used in MIDAS 50:50 is detectable.

TARPAULIN CUTTING AND REMOVAL:

- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block.
    - If the tarpaulin is removed from the field, removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.

CROP ROTATION RESTRICTIONS

Crops other than strawberry, tomatoes, peppers require a 4 month plant back rotation restriction. Strawberries, fresh market tomatoes and peppers can be planted into treated soil as soon as crop safety can be assured and no sooner than 10 days after treatment. See Planting Interval for specific instructions.

Application by Bed Shank fumigation: Use dosage rates and planting intervals as indicated in the Bedded Pre-Plant Soil Fumigation Table below. Row or bed applications are made at the rate of 300 lbs product per treated acre but the amount will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed (Refer to the rate modifier table in the AGRICULTURAL USE REQUIREMENTS Section above).

BEDDED PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Treated Acre*	Time Between Application and Planting**
Strawberry Tomato Pepper Field-Grown Ornamentals	300 lbs/Treated Acre (18.9 gal/Treated Acre)	10 – 14 days

* For raised bed the amount of product applied will be proportionately less per acre depending upon the row spacing and width of treatment in the row or bed.

o **

Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

Application by Broadcast or Flat fumigation: Use dosage rates and planting intervals as indicated in the Broadcast Pre-Plant Soil Fumigation Table below. Broadcast or Flat

fumigation shall be restricted to field-grown ornamentals and field sizes shall not exceed two (2) acres.

BROADCAST PRE-PLANT SOIL FUMIGATION TABLE

CROP	MIDAS 50:50 / Acre	Time Between Application and Planting*
Field-Grown Ornamentals	300 lbs / Acre (18.9 gal / Acre)	10 – 14 days

* If odors of fumigant persist beyond the two-week period you may disc, plow or chisel the soil to help aeration in a flat fume (broadcast) fumigation operation. Use the longer planting restriction periods under conditions of high soil moisture, heavy soils, or rain.

NOTE: Fumigation of highly acid soils or those high in organic matter can cause ammonia toxicity to the plants and or elevated levels of soluble salts in the soil. Fertilize as indicated from soil analysis following fumigation and avoid those fertilizers using ammonium salts.

IODOMETHANE PRE-PLANT FIELD FUMIGATION METHODS:
During the Experimental Use Permit program, fumigations with MIDAS 50:50 shall be performed in accordance with the following application techniques.

Tarpaulin/Bedded

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of no less than 6 inches below the soil surface. The treated ground must be sealed using either:
  - Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or
  - Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.
- Injection depth of between 6 and 15 inches. The injection depth in preformed beds must not be below the bed furrow.
- Injection spacing of 12 inches or less, typically performed with a multiple shank applicator.
- The tarpaulin shall not be cut for at least 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

Tarpaulin/Broadcast (ornamental crops only)

- Use tractor mounted chisels spaced no more than 12 inches apart and at a depth of 6 to 15 inches below the soil surface. The treated ground must be sealed using closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.
- The tarpaulin shall not be cut for a minimum of 5 days (120 hours) following completion of injection to the application block (See the TARPAULIN CUTTING AND REMOVAL Section above).
- Planting shall not occur for at least 10 days after application (See the PLANTING INTERVAL FOR ALL APPLICATIONS Section above).

CONDITIONS OF SALE

1. Arysta LifeScience North America Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use.
2. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arysta LifeScience North America. **ARYSTA LIFESCIENCE NORTH AMERICA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. ARYSTA LIFESCIENCE NORTH AMERICA DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**
3. Critical and unforeseeable factors beyond Arysta LifeScience North America's control prevent Arysta LifeScience North America from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which the product is applied, lack of complete control, and damage caused by drift to other plants or crops. Such risks occur even though the product is reasonably fit for the use stated on the label and even though label directions are followed. Except as stated in 1 above, Buyer and User acknowledge and assume all risks and liabilities resulting from handling, storage, and use of this product.

MIDAS is a trademark of Arysta LifeScience North America Corporation

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

DATE: July 20, 2006

SUBJECT: **Iodomethane:** Health Effects Division (HED) Evaluation Of The Proposed Experimental Use Permit. PC Code: 000011, DP Barcode: D330482

FROM: Jeffrey L. Dawson, Chemist/Risk Assessor
Elizabeth Mendez, Ph.D., Toxicologist/Risk Assessor
Michael Metzger, Branch Chief
Reregistration Branch 1
Health Effects Division (7509C)

TO: Mary Waller, Product Manager
Registration Division

The recently submitted application for an experimental use permit (EUP) for iodomethane has been reviewed by the Health Effects Division. This review only addresses elements of the proposal related to human health risks (i.e., bystander and occupational exposures). This review does not address the validity of the proposed testing program related to addressing issues such as the efficacy of iodomethane or the economics of using iodomethane as a possible replacement for methyl bromide. Several documents were considered in this review that can be identified by the following:

- Correspondence From Laurent Mezin (Regulatory Manager For Iodomethane, Arysta LifeScience North America Corporation) to Mary Waller (EPA, Registration Division, Product Manager 21) dated 4/24/2006.

- *Documentation Supporting Application For Experimental Use Permit (EUP) Iodomethane*, Submitted By Arysta LifeScience North America, Project Number ARV2006EUP, dated 4/24/2006.

- Updated Iodomethane labeling forwarded by Tamue Gibson, via email, to the Health Effects Division on 7/5/2006.

- Forwarded email correspondence on 7/12/2006 from Rick Tinsworth (Exponent Corporation, representing Arysta LifeScience) to Mary Waller (EPA, Registration Division, Product Manager 21) providing clarification on questions related to the design of the EUP research program.

The specific objectives of the research program, according to the 4/24/2006 correspondence from Laurent Mezin and the 7/12/2006 email correspondence from Rick Tinsworth, are threefold. These objectives, summarized based on the 7/12/2006 email, include:

- **Objective 1:** To deliver data that supports the technical feasibility of MIDAS as a methyl bromide replacement based on factors such as yield, compatibility with current application equipment, and efficacy with VIF or metallic films.

- **Objective 2:** To determine the economic feasibility of MIDAS compared to methyl bromide based on relative production costs and marketable yields and grower response.

- **Objective 3:** Based on the grower acceptance of both technical and economic feasibility the EUP program results will inform the risk benefit analysis.

The proposed testing program is summarized in Section G (page 41 of the 4/24/06 supporting document and in the correspondence from Laurent Mezin). The program is to be completed in the period from August 2006 to August 2007. Treatment to as much as 1000 acres in up to 275 individual field trials is requested in plots that range from 1 to 20 acres. The program is to be conducted in 7 different states that include Florida, Georgia, Michigan, North Carolina, South Carolina, Tennessee, and Virginia. The most acreage and number of trials is proposed for Florida (i.e., 600 acres and 150 trials). Tennessee has the lowest proposed values (i.e., 20 acres and 2 trials). The intent of the treatments in the trials is to prepare fields for strawberry, tomato, pepper, or field-grown ornamental production. The formulation to be used is MIDAS 50:50 which contains equal amounts of iodomethane and chloropicrin. Allowable application methods are all shank injection and result in tarped raised beds or tarped flat fume fumigation. The proposed maximum application rate is 300 pounds of product/treated acre which equates to a flat fume application rate of 150 pounds of iodomethane/treated acre. For raised bed applications, this rate is adjusted to account for the amount of treated area within each total cropped acre. The adjustment factors account for row spacing and raised bed width which range from 36 to 58 percent of the total area. Using these adjustment factors iodomethane application rates, based on total cropped acreage, range from approximately 60 to 90 pounds/acre when raised bed application methods are used.

The risk assessment for iodomethane (D325080; January 5, 2006; Authors: Mendez & Dawson) addresses the potential health risks associated with the uses proposed in the monitoring program. It should be noted that in the EUP package a number of studies were cited that are the same as the ones upon which the risk assessment is based. It is also important to note that the risk assessment evaluated many field situations based on different application methods/emission profiles, application rates, and field sizes, many of which differ or exceed the field situations allowed by the proposed label (e.g., the risk assessment addresses 40 acre fields and the EUP label only allows applications to up to 20 acre fields).

The proposed label provides the worker protection standard language pertaining to requirements for emergency/spill situations. It also specifies requirements for handler personal protective equipment and buffer zones to protect those who may be present in adjacent areas after an application event. The personal protective equipment (PPE) specified on the label includes:

- Loose fitting or well ventilated long-sleeved shirt and long pants;

- Shoes & socks;

- A respirator with a 3M Brand No. 60928 cartridge filter or equivalent (MSHA/NIOSH approved number prefix TC-23C);

- Drivers may use a closed cab equipped with an approved air fan dilution system or use of a tractor mounted iodomethane/chloropicrin adsorptive vapor filter in lieu of a personal respiratory protection device. This iodomethane/chloropicrin filter must be installed and changed according to the manufacturer's specifications.

- When handling the product (e.g., the mixer/loader), full face shield or safety glasses with brow, temple and side protection is required. Do not wear goggles.

- Specifications for engineering controls were also specified (e.g., hose fittings, tanks, site gauges, mechanical transfer systems, shut-off devices, and pressure limits).

The label requirements for the use of a respirator were evaluated based on the results in the risk assessment for occupational handlers (D325080, Table 12, page 50). A requirement for use of a respirator is consistent with the results for handler activities. Additionally, post-application activities (e.g., hole puncher, planter, and tarp removers) were also evaluated. The risk assessment indicates these tasks do not require the use of a respirator which is consistent with the proposed label. The Agency conducted a team review of the proposed EUP program and notes that on page 11 of 13 in the section entitled *Application by Broadcast or Flat Fumigation* there is a footnote to the table that allows treated fields to be plowed or disked to "help aeration" if there are situations where "odors of a fumigant persist" for two weeks. It is recommended an air purifying respirator also be required when conducting these activities.

The proposed label establishes buffer zones for raised bed applications intended to define exclusion areas in order to adequately protect bystanders who may live or otherwise spend time in areas adjacent to treated fields. No buffer zones are established in the proposed label for flat-fume applications. The development of a buffer approach is consistent with the risk assessment (D325080). On the label, buffer distances for raised bed applications at the maximum rate (up to 180 lb MIDAS 50/50 which equates to 90 lb iodmethane) are specified for 3 different field sizes (see page 7 of 13, EUP Buffer Zone Table). These are summarized below:

- Up to 5 Acres at >120 to 180 lb MIDAS (60 to 90 lb iodomethane)/acre: 115 Feet

- >5 to 10 Acres at >120 to 180 lb MIDAS (60 to 90 lb iodomethane)/acre: 250 Feet

- >10 to 20 Acres at >120 to 180 lb MIDAS (60 to 90 lb iodomethane)/acre: 445 Feet

The label-specified buffer values were determined using the PERFUM model in combination with the emissions (i.e., Guadalupe Tarped Raised Bed study) and weather data (Ventura CA) which provide the longest buffer distances (see D325080 for more details). From the PERFUM analyses, results were selected based on outputs that represent maximum distance buffers at a 90 lb iodomethane/cropped acre application rate at the 95th percentile of exposure. It should be noted that two possible toxicological effects were also considered (i.e., fetal death, HEC = 4 ppm and nasal lesions, HEC = 2.9 ppm) and that the proposed buffer distances are based on the nasal lesions endpoint (see D325080 for more details). In the Agency's analysis (contained in D325080), predicted buffer distances were essentially identical to those included in the proposed label for the same inputs and selected output parameters (e.g., percentile of exposure). In fact, the only value that differed slightly was for the buffer up to 5 acre fields where the label specified 115 feet and the Agency estimate was 100 feet. Of course, if other inputs or output parameters were considered the proposed label would require modification (e.g., if a different percentile of exposure was specified).

A buffer zone was not established for flat fume fumigation events that could occur under the proposed label. Using similar inputs and output statistics, the Agency evaluated predicted buffer distances from the risk assessment for flat-fume fumigation events and recommends that a buffer zone of 50 feet be established and incorporated into the proposed label. [Note: It is much different from those described above since flat fume applications are limited to field grown ornamentals at a maximum treated area of 2 acres.]

The Agency conducted a team review of the proposed EUP program and notes that on page 6 of 13 in the section entitled *Prohibition of Entry Into Treated Areas Adjacent To Treated Fields (EUP Buffer Zones)* there is no requirement for posting warning signs on buffer zones as is established for the treated areas themselves. The Agency recommends that these be posted at intervals around the perimeter of any buffer zone that is established to ensure adequate notification of effected bystanders in addition to the required warning signs on the treated areas. The Agency also requires clarification of the language included in this section, especially "it is required that the supervisors of experimental work under this EUP prohibit persons from being present in areas adjacent to the treated field." It is not clear how this would be accomplished in a consistent manner that would assure the Agency of appropriate compliance with this requirement. Finally, it is recommended that the buffer zones be established for a period of 48 hours instead of the 24 hours specified in the label. This is because of the possible longer emissions profile for iodomethane through metalized films and VIF films that could occur because of the lower permeability associated with these materials as opposed to typical high density polyethylene films which are predominant in the industry and which were used to conduct all iodomethane field emissions research used in the risk assessment. Finally, the Agency is concerned about the possibility of multiple field trials being conducted in proximity to one another. The buffer zones are intended to adequately reduce risks from single application events. In order to prevent possible effects from additive application events the Agency requires that a separation zone of 1/2 mile be established between the outside perimeters of any buffer zones in a localized area during the 48 hour periods when the buffer zones are required to be in place.

In the section entitled Precautions For Usage Prior To, During, And After Soil Fumigation: Prior To Fumigation, it is recommended that "Comply with all local ordinances and regulations" be modified to "Comply with all applicable state and county ordinances and regulations."

Finally, the objectives of this program do not include generating additional monitoring data that will be quantitatively useful for adjusting or refining the human health risk assessment such as field volatility or meteorological data. However, it is possible that other factors in the risk assessment could be impacted based on the results of this program such as enhanced information pertaining to application rate reduction due to the use of VIF or metalized films during application. These are hypothesized to retain more iodomethane in the soil due to their lower permeability which theoretically would reduce the amounts needed to achieve acceptable efficacy. It is recommended, however, that additional monitoring data be developed in order to quantify emissions at the lower application rates anticipated when using metalized films or VIF films. Specifically, the Agency believes the following studies would provide useful information for refining the risk assessment in a quantitative manner:

- Metalized film tarped raised bed application in Florida;
- VIF film tarped raised bed application in Florida;
- Metalized film tarped raised bed application in Michigan; and
- VIF film tarped raised bed application in Michigan.

It is recommended that the Arysta protocol be used for collecting these data from that latest iodomethane field volatility/emissions work with a couple of modifications that include:

- Use of a sonic anemometer to reduce the impact of calm periods; and
- Addition of samplers to aerodynamic flux calculations.

[Note: Michigan and Florida were selected because they represent likely high use areas for iodomethane, different cultural practices, and different soil types and weather conditions which may impact emissions profiles.]

Pages 221-223 Confidential Statement of Formula may be entitled to confidential treatment